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Funding Our Environmental Future

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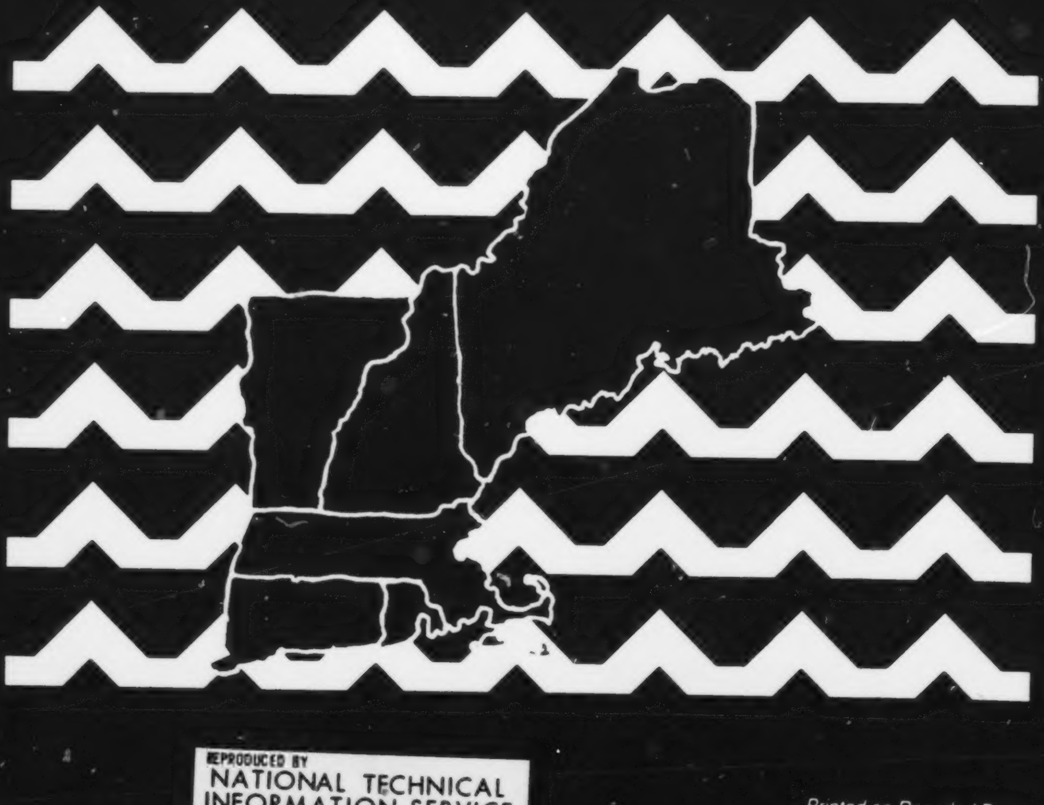
November 6-7, 1989
Northampton, MA



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This is perhaps the single most comprehensive document available for information on non-traditional financing approaches for environmental facilities and services. It includes information and case studies on a number of financing techniques including public-private partnerships.

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Preface Conference Proceedings and Action Agenda

These proceedings are from the U.S. Environmental Protection Agency Region 1 conference entitled *Funding Our Environmental Future: Public-Private Partnerships and Alternative Financing Mechanisms to Support Local and State Environmental Programs* held in Northampton, Massachusetts on November 6-7, 1989. This conference was cosponsored by the New England Interstate Water Pollution Control Commission (NEIWPCC), the New England Water Works Association (NEWWA), and the New England Waste Management Officials Association (NEWMOA).

Included is an Action Agenda, developed during the conference, which outlines roles for key players in both the Public-Private Partnerships and Alternative Financing Mechanisms Initiatives. We ask that you provide us with your views and comments on the ideas and suggestions presented during the conference. As you pursue these options for financing environmental programs, we hope you find the materials useful and informative.

Charles L. Grizzle
Assistant Administrator
Office of Administration and Resources Management
U.S. Environmental Protection Agency

LaJuana Wilcher
Assistant Administrator
Office of Water
U.S. Environmental Protection Agency

Paul Keough
Deputy Regional Administrator
U.S. Environmental Protection Agency, Region 1

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New England Interstate Water Pollution Control Commission

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Region 1 Welcome

Speaker **Ron Poltak**
Executive Director
New England Interstate Water Pollution Control Commission

Welcome to Funding Our Environmental Future: Public-Private Partnerships and Alternative Financing Mechanisms to Support Local and State Environmental Programs. This conference is jointly sponsored by the Environmental Protection Agency, the New England Interstate Water Pollution Control Commission, the New England Water Works Association, and the New England Waste Management Officials Association.

The conference is geared to encourage discussion of our environmental future, particularly with respect to the prospects for adequately funding programs to meet our environmental challenges. We will be examining two methods of financing that states and localities are employing: public-private partnerships and alternative financing mechanisms. We hope that these discussions will yield information that is useful in supporting the evolving programs of localities, states, and EPA as each seeks to develop and support the most effective and efficient ways to fund our environmental future.

Speaker **Julie Belaga**
U.S. Environmental Protection Agency
Region 1

The prospects for environmental financing pose a great challenge to us. Yet they are critical to the future of New England. We know now that the federal government cannot and will not be able to fund all or most of the environmental protection that we undertake around the country. The public perception that the federal government will do everything must change and is changing. It is our task to create and maintain the partnerships that meet the challenges of funding programs that ensure an environmental future we all wish for. I hope the results of this conference will contribute greatly toward this end.

Region 1 Opening Remarks

Speaker **Paul Keough**
Deputy Regional Administrator
U.S. Environmental Protection Agency
Region 1

Region 1 has had a traditionally strong commitment to environmental quality, with many of its accomplishments recognized nationally. But faced with the reality of escalating costs, we are challenged to find ways to fund our environmental future. State and local programs have grown dramatically and dynamically over the last decade. But new requirements and continuing, extensive infrastructural needs have resulted in a significant shortfall of funding, amounting to billions of dollars nationally.

Potential Solutions to the Funding Shortfall

Among the solutions to the funding shortfall open to us are:

- **Innovative forms of environmental financing at all levels of government;**
- **Public-private partnerships at the local level; and**
- **Alternative financing techniques in state environmental programs to augment revenues received from general budget allocations.**

Lessons to Learn In each case, there are several lessons to be learned. We must:

- Document successes;
- Understand contributing success factors;
- Encourage partnerships in other localities;
- Learn prospects for funding sources from colleagues and state officials; and
- Develop appropriate measures for specific state needs.

This conference allows us to share ideas and successes from all levels of government, and from the private sector, whose expertise, creativity, and financial support are invaluable resources for our environmental programs. It is the first time that the Public-Private Partnerships and Alternative Financing Mechanisms Initiatives have shared a common forum to address the environmental funding shortfall. It is appropriate that they join forces as each seeks to ensure that we can effectively fund our environmental future.

Keynote Address

Facing the Challenge

Speaker

Charles L. Grizzle
Assistant Administrator
Office of Administration and Resources Management
U.S. Environmental Protection Agency

Our Most Difficult Challenge is Paying for Environmental Services

This is the third conference sponsored by EPA featuring public-private partnerships, and the first to incorporate the concurrent theme of alternative financing mechanisms. Both concepts, I believe, need to be explored as innovative approaches to funding environmental protection. The single most difficult challenge we face in environmental protection today is paying for necessary infrastructure and services.

Environmental issues appear to run in cycles. During the 1960s, this country's first major environmental movement was forged in response to deplorable environmental conditions. The turning point came in 1971. That year, Congress created the EPA. And with that, they went on to initiate the legislation that forms the basis of today's fundamental environmental protection programs. The original laws were bold, sweeping measures lifting environmental concerns to the foreground of the public agenda. As a result, we now enjoy healthier air, cleaner water and safer land.

Public Demands for Environmental Protection Continue to Rise

Still, public demands for environmental protection continue to rise. One sign of this is the translation of expectations about EPA's performance into legislative mandates for action. During the past few years, there has been a high level of activity on environmental legislation. Past legislation was reauthorized, and new legislation passed. In 1988 alone, Congress enacted seven important pieces of environmental legislation.

State and Local Governments have Primary Roles for Environmental Protection

At the same time, there has been a shift of responsibility for providing environmental services. State and local governments now assume the primary roles for implementing environmental policy. EPA used to mandate environment services. But it was easy for us then since we had the money to support the items on our slate. The Agency's resources to assist state and local governments now are, and will remain, limited. The Agency has now moved to more of a support role.

The high costs of environmental service on state and local governments has brought us full circle to our second environmental crossroads — how can we fund necessary environmental protection. Many of our nation's towns and cities, faced with the expensive problem of complying with new regulations, still rely on antiquated facilities, many showing the inevitable signs of decay. Traditional resources just cannot provide the revenues needed to construct new facilities or upgrade existing systems.

A Funding Gap of $20 Billion Annually by the Year 2000

The seriousness of this situation is underscored by a recent EPA study. It estimates the difference between what we now spend for environmental protection and what the public sector will need to spend may reach $20 billion annually within the next decade.

There are several key elements to President Bush's and Administrator Reilly's philosophy on what we can do. We must:

- **Harness the forces of the marketplace to advance environmental protection goals;**
- **Reach out to new partners — energizing corporate America;**
- **Encourage local initiative;**
- **Work together to overcome unnecessary public resistance to innovative financing techniques; and**
- **Develop and build the working relationships of the federal government with its state and local partners.**

Increased Public Involvement is Critical

This conference provides an excellent opportunity to exchange ideas both formally and informally. For instance, local officials frequently mention to me that EPA and Congress pass on responsibilities to state and local governments without first considering how these governments will be able to finance these requirements. Not only do I agree, but I would go as far as to say it is symptomatic of a much larger problem. EPA, try as it will, simply does not always understand the needs and capabilities of state and local governments.

The Key to Finding Flexibility and Innovation is Communication

We need to gain perspective to become more effective in developing regulations, implementing new programs and refining existing procedures. We have also started to examine our regulations to assess their impact on municipalities. We hope to empower local governments with the flexibility necessary to cultivate innovation. I think the key to finding flexibility is communication. We must communicate with the private sector, the American public and other levels of government.

Communication is important for several reasons. We need to:

- Harness the abilities of the private sector;
- Gain support from the American public for new financing concepts and innovative ways of conducting business; and
- Work effectively with levels of government to effectively protect our natural resources.

The crossroads is before us. We can choose to make this a turning point in the environmental movement or we can proceed along a path that threatens to overwhelm us.

Panel Session

Local, State, and Federal Perspectives on Environmental Financing

Moderator

Patricia Meaney
Assistant Regional Administrator
U.S. Environmental Protection Agency
Region 1

Our purpose in the conference's opening panel session is to gain a perspective from every level of government on environmental financing. Each panelist will address the problem from his or her perspective, and offer strategies for cooperation and information sharing.

Speaker

Daniel Greenbaum
Commissioner
Massachusetts Department of Environmental Protection

What better time could there be to discuss how best to use increasingly limited dollars to work for environmental protection? Nationally, the federal government is contributing fewer resources than ever before. In Massachusetts, our Commonwealth is in the midst of discussions about cutbacks across all programs.

We are facing the challenge of environmental financing in two ways. The first is through Departmental operating budget funds. The sources of operating budget funds include:

- 50 percent from Commonwealth taxes for general revenues;
- 25 percent from federal grants; and
- 25 percent through fines and fee systems to support services.

With diminished funding from traditionally available federal grants and Commonwealth revenues, the importance of obtaining funds through alternative financing mechanisms has increased. Alternatives include a designated use for fees and fines.

Massachusetts' Dedicated Fees

Massachusetts currently uses a number of dedicated fees. They include:

- Transporter fees on hazardous waste movement;

- Wetlands permits fees for activities in wetlands areas; and

- Impact fees assessed on developers seeking land use authorization.

Massachusetts is looking to develop additional sources of designated funds, among them a broad based fee to be collected from facilities for all their discharges into water, air, and land.

The Value of Fee Systems

Fee systems like this and the ones mentioned above:

- **Collect funds to pay for the service affiliated with the activity being assessed; and**

- **Provide disincentives to those who may otherwise freely appropriate natural resources for their own use.**

Fines and administrative penalties dedicated back to the Department amount to $1.5 to 2.0 million per year but of course cannot be considered a reliable source of revenue. The Commonwealth has elicited involvement from the private sector in carrying out environmental services. In the future, dischargers of effluent into surface waters could be asked to conduct ambient monitoring up and downstream from the discharge point. Localities too might play increasingly important roles in planning, operating, and monitoring regulated sites.

In addition to operating budget funds, a second source of funding for environmental services relates to capital investment. Current estimates identify needs in excess of $7 billion across Massachusetts for wastewater treatment, water supply, and solid waste management and disposal.

The Prospects of Capital Investment

There are at least two problems with capital investment: first, constraints on local borrowing to raise funds for capital investment; and second, a reluctance to adopt user fees that reflect the true costs of the service. The unwillingness or inability of local authorities to assume the necessary leadership role to overcome these factors assigns to the Commonwealth, by default, a preeminent role in providing capital grants and loans for environmental services. Unfortunately however, with fewer dollars available, the share of Commonwealth subsidization of capital projects at the local level is down perceptibly. As a result, the collection of user and impact fees and the use of state backed industrial revenue bonds and revolving loans will increase as means by which local capital programs can be undertaken. But in all cases, there is a ceiling beyond which the use of these mechanisms cannot be supported.

In summary, there is no way Massachusetts can forego the use of dedicated fees to provide funding for its environmental programs. We could not live without the money. But there are pitfalls, including the potential for litigation challenging the validity of the fee and referenda seeking to roll back their use. States can anticipate and prepare for these challenges. Remember that the fundamental issue for states to consider is how to balance the demands of environmental financing with all the other public service financing it has responsibility to provide.

Speaker

Philip Shapiro
Director
Finance and Development
Massachusetts Water Resources Authority

The budget needs of the Massachusetts Water Resources Authority (MWRA) for the next decade will amount to nearly $5 billion, 68% of which are for court ordered projects. This will require borrowing $6.26 billion to cover these capital needs alone. Federal grants through EPA Construction Grants, a traditional, primary source of capital funding will end soon and will have provided between now and FY 1994 only $129 million to Massachusetts, half of which will likely be allocated to MWRA. This will cover only about 1% of the Authority's overall costs.

EPA and Massachusetts have both indicated through the streamlining of current budgets that the MWRA should assume a larger share of the environmental financing burden than it has done in the past. But both continue to assign additional requirements and compliance responsibilities to the Authority without providing accompanying resources to help MWRA carry out these responsibilities.

Rate Payers will have to Assume More of the Burden for Capital Investment

Although Massachusetts' state revolving fund legislation is a healthy step forward, the Commonwealth's current fiscal health necessitates only minimal funding for the State Revolving Fund (SRF) at this time. The net result of the federal and state withdrawal from funding water services is that the MWRA rate payers will bear the full burden of the Authority's capital program. Water and sewage rates have already increased by 300% in the last five years. It is projected that the average household will be paying $100 a month by the year 2000, compared to $30 a month today, up an additional 300%.

The private sector — residences, business, and industry — already are funding the program through the rates they are paying. The only added role for the private sector that might be considered is an industrial use permitting fee. The fee would shift the cost of cleaning up industrial pollution to the discharger itself. This would not represent a new income source for the Authority, it would simply constitute a cost shift.

New Revenue Streams Need to be Identified

The MWRA believes new revenue streams should be identified to ensure that the full burden of compliance is not borne by ratepayers. This could take place, using the proposition 2 1/2 philosophy that would require the framers of the new regulations to identify the source of each initiative's funding. This could include dedicated revenue streams at the state level, local option taxes with proceeds to fund environmental budgets, and a $1 per barrel charge on oil to fund environmental clean up.

Speaker

Brian Sarault
Mayor
Pawtucket, Rhode Island

I would like to discuss two environmental challenges Pawtucket has had to face in recent years as it seeks to provide environmental services to the community. They are its problems with the City's combined sewer overflow (CSO) capacity and the upkeep of its drinking water treatment facilities.

Pawtucket's 30 CSOs are pouring millions of gallons of polluted water into Narraganset Bay and will cost more than $50 million to repair. Its water system, which has been providing millions of gallons of inadequately treated water into people's homes, will cost $23 million to remedy.

Tax Burden on Home and Auto Owners

Pawtucket is an older, fully developed, urban community, with a population of 75,000. A tax classification plan implemented four years ago has frozen the commercial tax rate until 1994, leaving home and auto owners to absorb any additional tax burden.

The need to overhaul CSOs has existed for some time. In the late 1970s and early 1980s, federal and state funding was more readily available through EPA's Construction Grants and the state's accompanying matching funds. Unfortunately, overhauling CSOs was low on the state priority list.

In 1987, the state and Pawtucket entered into a consent agreement to study how best to solve Pawtucket's CSO pollution problem. But the agreement was not clearly defined. Specifically, the agreement did not include:

The Initial Solution Failed to Confront Several Important Issues

- The approximately $1 million needed to pay for the study;
- A study scope and timeframe;
- Delineation of responsibility for the study; and
- A decision concerning the inclusion of a neighboring community's CSO in the Pawtucket system.

Since then, extensive negotiations have led to new legislation. The legislation:

- Assigns responsibility for the study and CSO repairs to the Regional District Sewer Commission;
- Extends the scope of the study to include the neighboring town; and
- Designates the potential source of funding to be the state's new Environmental Fund (once rules for awarding the grant are determined).

The source of the $50 million necessary to make repairs to the system has not yet been determined.

Pawtucket's Drinking Water Problem

Experts had estimated in the mid-1970s that the drinking water problem in Pawtucket would cost more than $20 million to correct. But until we addressed the problem recently, only $100 thousand per year was being allocated for necessary repairs. A recent study concluded that creating a public building authority (PBA) would be the fastest and most effective solution to drinking water problems. The PBA would oversee the allocation of bonds for funding the $23 million in repairs and improvements.

These considerations are complicated by the many other issues that crowd a mayor's plate: labor, health, and education demands; emergencies like the collapse of one CSO, requiring immediate repair; and efforts to constrain community authority to raise revenues. These problems are not local to Pawtucket.

Reasons for Inadequate Environmental Infrastructure

The current state of our environmental infrastructure results from:

- **Ineffective environmental management at all levels to resolve issues of funding, jurisdiction, and responsibility;**
- **A federal trend to impose regulations without providing sufficient funds to carry out mandates;**
- **Inflexibly imposed timeframes on local communities struggling to respond to federal regulations; and**
- **Little coordination among federal departments to delineate mandates, timeframes, and regulations.**

Given these concerns, it is important that government and non-government agencies at all levels involved with the problem work together toward solutions which meet everyone's needs and ensure that time and resources can be spent where they should be.

Pawtucket's approach to solving these problems has and will continue to focus on:

Pawtucket's Problem Solving Approach

- Lobbying for money from the federal purse. We cannot let our legislators preach cleaning up the environment while ignoring the lack of necessary funding;
- Seeking alternative revenue sources like the PBA. The issuance of bonds through the PBA would be repaid directly through water rates, as opposed to property taxes; and
- Adjusting our environmental management structures and policies to make sure they also identify funding sources and ways to distribute that funding.

Speaker **John J. Sandy**
Director
Resource Management Division
U.S. Environmental Protection Agency

I am here to talk about the federal perspective on environmental financing, and wish to discuss, in particular, public-private partnerships. Partnerships are not a panacea, but there are success stories.

They have great potential to help communities cope with the environmental infrastructure problem.

Reducing the Gap Between Needs and Resources

The Public-Private Partnerships Initiative (P3) began as part of a Reagan Administration drive to contract out federal services. Then Administrator Lee Thomas decided EPA needed to go beyond its traditional approach and use privatization to address the critical environmental and resource needs facing the country. That is, help reduce the growing shortfall between needs and resources.

The purpose of P3 is to help state and local officials find options for financing environmental activities. Our goal is simple — increase private sector investment and participation in providing environmental services.

Products of the Public-Private Partnerships Initiative

Our products and plans geared to these ends have included the following:

- A national strategy document, a blueprint for P3 activities;
- An Environmental Financial Advisory Board to provide advice and counsel on new and innovative financing approaches, legislative and regulatory options, and strategies for implementing partnerships;
- Case studies of successful public-private partnerships;
- A Self-Help Guide for local officials on how to conduct a joint venture with the private sector (to be available in February, 1990);
- A national debate document reflecting diverse opinions on environmental financing issues (to be available in the Spring of 1990); and
- A series of P3 demonstration projects to help communities create successful partnerships (two projects have already been funded).

The Goal: Institutionalizing Partnerships and Alternative Funding

We must do more work in integrating financing into our environmental decision-making. We must think about how we are going to pay for environmental decisions up front. No longer do we have the luxury of assuming enormous cost burdens and then looking around for someone else to pay the bill. It is our goal to institutionalize this upfront consideration of public-private partnerships and other innovative approaches in the Agency's decision making process in every environmental area and for every piece of legislation.

This is not a short term initiative designed to serve fleeting purposes. It is a program set up to help address a long term challenge and it will be active for many years to come. It will be successful only if we help communities provide more and better environmental services at a reasonable cost.

Speaker

Rebecca Hanmer
Special Assistant
to the Deputy Administrator
U.S. Environmental Protection Agency

The State Funding Study

In May, 1988, the Environmental Protection Agency initiated a State Funding Study. Due to recent legislative changes in the Clean Water and Safe Drinking Water Acts, states have to implement many new activities to water programs, with little federal money available to help them do so. The EPA undertook the study to help states find new resources to support both their base programs and their new responsibilities.

Purpose of the Study

The purpose of the State Funding Study was to:

- **Find out how much new money states would need to both maintain their essential base water programs and carry out all new requirements;**
- **Identify ways to obtain the new money through federal and state solutions;**
- **Publicize the problem and its potential solutions to stimulate action;**
- **Stimulate and support state efforts to increase financial resources through alternative financing mechanisms;**
- **Chart a course for EPA to support state programs, both financial and technical; and perhaps most importantly,**
- **Strengthen partnerships and increase collaboration among EPA, states, and interest groups.**

It's Critical to have Strong State Programs

We are very aware that local governments bear a large share of the costs of funding water programs. However, we must have strong state programs to set good water quality standards and goals, ensure that priority problems are addressed first, that downstream jurisdictions do not suffer from decisions made by upstream jurisdictions, and that small communities that cannot afford to manage their infrastructure are helped.

Out of this study have come a number of key recommendations. Let me share them with you.

Study Recommendations:

1. **EPA and the states must assess the needs of state programs. The Study initially quantified state program funding needs through 1995, but such an activity needs to be institutionalized and updated periodically.**

2. **EPA needs to publicize the state program funding problem and generate support for solutions.**

3. **EPA and states need to find new funds through state supplemental financing mechanisms. These mechanisms include increased or new fees for services, special or dedicated taxes, dedicated revenues from fines and penalties, dedicated management funds or special accounts, and dedication of funds from a state lottery, tax check off, or sale of vanity license plates.**

4. **State environmental programs should attempt to obtain additional funds from general state revenues.**

5. **EPA should provide federal grants to continue needed support of state programs.**

6. **States and EPA can work to reduce the state financial burden by implementing improved management efficiencies and regulatory procedures.**

7. **EPA should increase technical assistance to states and municipalities.**

8. **EPA and states should improve coordination among all environmental programs and among other agencies.**

9. **EPA needs to coordinate efforts of each OW program office to strengthen state capacity to implement water program goals.**

EPA is circulating these draft recommendations to all who have participated in the study or who are affected by these issues. We seek your advice and comment, and intend, with the consensus that comes out of the discussions about these recommendations, to carry out actions that help states find resources to do the environmental tasks before them.

The bottom line is that we wanted action, and we found plenty of it — at the state level, at the local level, and among ourselves. I would like to leave you with a few final thoughts on how to capitalize on that action.

States and EPA must Creatively Work Together

- We must prevent pollution before it becomes an expensive product that must be treated to render it harmless;
- We must prioritize our actions, and spend our money where it is most needed. One of the most powerful tools we have to prioritize problems and solve them are State Clean Water Strategies;
- We must break the mold by thinking creatively and working together; and
- We must, when passing new laws and requirements, think about how to fund them.

Panel Session

Public-Private Partnerships: What are Public-Private Partnerships?

Moderator

David Osterman
Branch Chief, Resource Planning and Analysis Branch
U.S. Environmental Protection Agency

This morning's session will consist of two segments. First, I would like to give you some background information on what a public-private partnership is and the different types of public-private partnerships that exist. Following this presentation, we will proceed with the first two case studies on partnerships to be reviewed in the next two days. In each case study we hope to provide the following information: how the partnership was implemented, why the private partner was chosen, what the financing and procurement arrangements were, and what advantages and disadvantages were associated with the partnership.

What is a Public-Private Partnership?

Definition of Partnerships

A public-private partnership is a contractual relationship between a public and private party that commits both to providing an environmental service.

Partnership Definitions:

At least five types of public-private partnerships exist. They involve varying amounts of private involvement. The key features of each of these types of partnerships are as follows:

Contract Services. In this type of partnership, the private sector is contracted to provide a specific municipal service, such as garbage collection or the maintenance and operation of a waste treatment facility. The facilities are owned by the public sector. Found most commonly in the solid waste area, the primary advantage is better services or lower costs, although the municipality loses some control over operations.

Turnkey Projects. In this type of arrangement the private sector designs, constructs, and operates an environmental facility. The facility is still owned by the public sector. The private sector assumes more risk, and cost savings may result by working with only one contractor for design, construction and operation rather than two or three. This type of public-private partnership is mostly pursued in waste-to-energy and recycling facilities.

Developer/Municipal Financing. In this type of arrangement, the private sector (usually private developers) finances the construction or expansion of an environmental facility in return for the right to build houses, stores, or industrial facilities. This type of partnership only works in growing communities since those responsible for growth pay for the expansion of the facilities.

Privatization. In this type of public-private partnership, the private sector owns, builds, and operates the facility. It also partially or totally finances the facility. Private investment reduces public need for capital, but the municipality has reduced control over policy objectives.

Merchant Facilities. In this type of arrangement, the private sector makes a business decision to provide an environmental service to a community with the expectation that it will make a profit from the services provided. In merchant facilities not only does the private sector own and operate the facility as in privatization deals, but it also makes the decision to provide an environmental service to a community. Facilities are usually completely financed with private sector funds, but merchant arrangements will not work for all types of environmental services.

A division of responsibilities for potential activities for the public and private partner generally exists along the following lines for each type of partnership:

Activity	Contract Services	Turnkey Facility	Developer Financing	Privatization	Merchant Facility
Decision to Provide Services	Public	Public	Public	Public	Private
Financing	Public	Public	Private	Private	Private
Design	Public	Private	Either	Private	Private
Construction	Public	Private	Either	Private	Private
Ownership	Public	Public	Either	Private	Private
Operation & Maintenance	Private	Private	Either	Private	Private

As private involvement increases, two things happen:

- The private sector invests more of its funds; and
- The private sector assumes more of the risk for the effective operation of the facility.

Tradeoffs must be made between Investment, Risk and Control

On the other hand, the greater the private involvement the less control the municipality has over the delivery and cost of the service. In deciding what kind of partnership is most appropriate, communities have to make tradeoffs between these three factors: private investment, risk, and control. Partnerships have to be tailored to the needs of communities. Certain types of partnerships will work more effectively than others, depending on the requirements and needs of the community.

There are four considerations to keep in mind:

- There are currently many partnerships that exist;
- A partnership must be tailored to meet the needs of the community;
- To expand the market, there must be changes to tax laws and regulations; and
- Advantages to private involvement include lower costs, greater expertise, improved performance, and faster completion.

In conclusion, as we listen to the case studies over the next day and a half, we should seek to understand first, what makes them successful; second, what was the advantage in using the private sector — reduced costs, speedier project completion, access to specialized expertise; and third, what were some of the barriers that had to be overcome in implementing the projects.

The first of these case studies will be presented by Donald Rogers of Envirotech Operating Services, Inc. His company currently operates and maintains the wastewater treatment facility in Leominster, MA, as part of a partnership agreement. Today he is, in fact, substituting for Stephen Perla, the Mayor of Leominster. Robert Murray is also with us. He is an operations engineer with the Rhode Island Solid Waste Management Corporation (RISWMC) and will speak to us about RISWMC's contractual arrangements with the New England Container Recovery, Inc. for operation and maintenance of its resource recycling facility.

Case Studies: Leominster, MA
Wastewater Treatment
CONTRACT SERVICES

Donald Rodgers
District Manager
Envirotech Operating Services

Johnston, RI
Recycling Facility
CONTRACT SERVICES

Robert Murray
Operations Engineer
Rhode Island Solid Waste Management Corporation

The following case study was not presented at the conference, but is included as supplemental material.

Hull, MA
Wastewater Treatment
CONTRACT SERVICES

Norman Rogers
Chief Facility Manager
Water Pollution Control Facility

WASTEWATER

Contract Services

WASTEWATER TREATMENT PLANT

LEOMINSTER, MASSACHUSETTS

Leominster, Massachusetts

- **The City of Leominster, Massachusetts joined forces with a private partner, Envirotech Operating Services, Inc. (EOS) for the operation and maintenance of the Leominster, Massachusetts Publicly Owned Wastewater Treatment Plant.**
- **The construction of the facility was financed both by municipal bonds and state and federal grants.**
- **The public partner (City of Leominster) secures needed permits, and the private partner (EOS), accepts the responsibility for monitoring performance and assuring compliance with state and federal regulations. Contracting with the private partner has improved the overall operation of the plant.**

SUMMARY

The City of Leominster, Massachusetts worked together with surrounding communities to plan the construction of the publicly owned wastewater treatment plant. The plant has been designed to accommodate the increasing demand for wastewater treatment in the Leominster area. This facility services the City of Leominster (population: 37,000) and fifteen other communities that contribute privately-hauled wastewater to the plant for treatment.

In this public-private partnership Envirotech Operating Services, Inc. (EOS) operates the publicly owned wastewater treatment plant for the City of Leominster. The City contracted the construction of the new facility with Barletta Construction Company in June of 1983. Work was completed in 1983. The City then contracted the operation and maintenance of the plant with EOS — the private partner in this case study. For this contract, the City used the request for proposal process, interviews with bidding contracting firms, and negotiation of a long term operation and maintenance contract with EOS.

This wastewater treatment project with EOS has contributed greatly to alleviating potential health hazards and resulting economic burdens on the community in and around Leominster that would have resulted if this facility had not been constructed.

PARTIES INVOLVED AND TIMEFRAME

Public Partner	City of Leominster, Massachusetts
Private Partner	Envirotech Operating Services, Inc.
Population (Leominster Area)	37,000
Median Household Income	$24,000
Form of Government	Mayor/City Council
Project Initiated	July 1, 1983
Project Completed	On-going (5-year renewals)
Total Capital Cost	$20 million (1983)

WHY WAS A PRIVATE PARTNER CHOSEN/OTHER ALTERNATIVES

- Taxpayer burden reduced
- More cost-effective

The first alternative considered, but rejected, was City employee operation. A private partner was then chosen because the annual operations and maintenance costs were estimated to be lower with Envirotech Operating Services, Inc. (EOS) when compared to City operation. This arrangement reduced the taxpayer burden constraints on how the city invests and spends its revenues.

Contracting with the private partner, EOS, has proven to be more cost-effective. In addition, the technical expertise provided by EOS has improved the operation and maintenance of the plant.

WHAT WERE THE FINANCING ARRANGEMENTS?

- Municipal bonds and federal grants financed the project

The City of Leominster arranged the financing of construction of this project by obtaining municipal bonds and state and federal grants (sewer service fees provide collateral for this venture).

Sewage charges cover the costs of operating and maintaining the facility.

WHAT WERE THE PROCUREMENT ARRANGEMENTS?

The contract services for the operation and maintenance of the plant were arranged with the City of Leominster through the request for proposal process, interviews, and ultimately, the negotiation of a long term (5 year) contract with Envirotech Operating Services, Inc. (EOS).

WHAT WAS THE DIVISION OF RESPONSIBILITIES?

The City of Leominster, Massachusetts — Public Partner

- Decided to build, obtain financing, and maintain ownership of the wastewater treatment plant
- Secured the environmental and building permits

Wastewater Commission of Leominster

- Represented the Leominster community by mediating public and private issues

WHAT WAS THE DIVISION OF RESPONSIBILITIES? (Continued)

Envirotech Operating Services, Inc. (EOS) — Private Partner

- Operates and maintains the publicly owned wastewater treatment plant
- Complies with environmental and building permit requirements

HOW WAS THE PROJECT IMPLEMENTED?

A Wastewater Commission was appointed by the Mayor of Leominster, for the purpose of addressing any public and private concerns.

WHY WAS THE PROJECT SUCCESSFUL?

- Cooperation between public and private partners existed throughout the project

Contract operation (private sector) of the publicly owned wastewater treatment plant is a viable cost-effective alternative to municipal operation (public sector). Contract operation provides the owner with guarantees for successful facility maintenance and performance, and controllable costs for operation.

LESSONS LEARNED

The public sector can learn to have trust and confidence in the private sector through the private sector's continued efforts to provide high quality products and services.

The City of Leominster and Envirotech Operating Services, Inc. continue to work at a public-private partnership of the highest quality and integrity.

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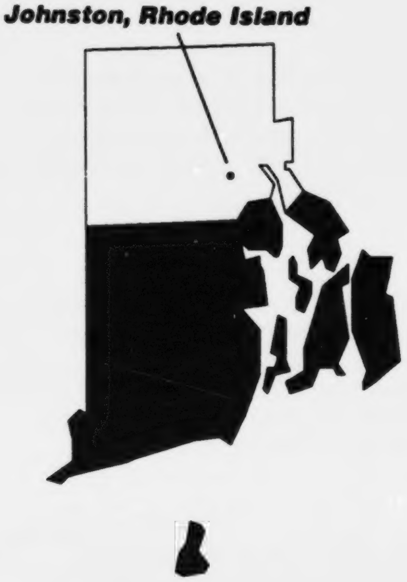
Information is available to the public upon request.

SOLID WASTE

Contract Services

RECYCLING FACILITY
JOHNSTON, RHODE ISLAND



- **The Rhode Island Solid Waste Management Corporation (RISWMC) contracts with New England Container Recovery Incorporated for operation and maintenance of its resource recycling facility.**
- **Revenue bonds sold to finance the the facility will be repaid from the sale of recyclables and revenue generated from tipping fees from an adjacent landfill that is also owned by RISWMC.**
- **The recycling facility has reduced the volume of waste going to landfills by fifteen percent in the communities that are participating in the recycling priogram.**

SUMMARY

The decision to build a resource recovery facility was driven by the State's legislative climate. Prompted by the passage of the Rhode Island Recycling Act, the Rhode Island Solid Waste Management Corporation (RISWMC) was required to build and operate three resource recovery facilities. The recycling act is part of a broader solid waste act that establishes flow control over municipal solid waste and sets a policy of reducing, reusing, recycling, and recovering energy from solid waste in preference to disposal in landfills. RISWMC entered into a contract with New England Container Recovery Incorporated (NECRInc) to recycle the plastic, aluminum, tin, glass, and paper that is generated by more than 380,000 households and 20 communities in Rhode Island. Limited technical expertise in operating recycling facilities, coupled with the belief that the private sector is better able to market the recycled materials, influenced RISWMC's decision to contract for this service.

PARTIES INVOLVED AND TIMEFRAME

Public Partner	Rhode Island Solid Waste Management Corporation (RISWMC)
Private Partner	New England Container Recovery Incorporated (NECRInc)
Population (Johnston)	500,000
Median Household Income	$25,000
Form of Government	Quasi-private agency
Project Initiated	May 1989
Project Completed	May 1992
Total Capital Cost	$5.5 million

WHY WAS A PRIVATE PARTNER CHOSEN/OTHER ALTERNATIVES

Two options were considered for providing this environmental service. Rhode Island Solid Waste Management Corporation could either choose to provide the service itself or they could contract for the service. RISWMC decided that they would not operate the facility because they felt that the private sector would be better at marketing the recycled materials. Another factor that influenced RISWMC's decision to contract was they lacked the necessary design, construction, and operation and maintenance expertise required to build and operate the facility.

WHAT WERE THE FINANCING ARRANGEMENTS?

- Both industrial revenue bonds and a one-time grant were used to fund this project

Capital Expenses

The initial capital costs associated with the facility were financed by the issuance of tax-exempt municipal bonds and a one time cash grant directly supplied by RISWMC in the amount of $500,000. In 1987, RISWMC issued Solid Waste Disposal Revenue Bonds in the amount of $3,800,000. Anticipated revenue from the sale of recyclables and tipping fees from the adjacent landfill were used to secure these bonds.

Operational Expenses

RISWMC provides a materials recycling facility which currently serves eleven municipalities representing approximately one-half of the State's population. Disposal of recyclables at the facility is provided to the municipalities free of charge and for a price that is one-quarter of the commercial tip fee at the Central Landfill. The primary source of revenue used to operate the facility is from the sale of recovered materials; a secondary source of revenue is derived from landfill tip fees. The revenue from the sale of recovered materials represents approximately eighty to ninety percent of the funds necessary to pay for operation and maintenance.

NECRInc shares in ten percent of the revenue derived from recovered materials sold. NECRInc is also paid an operation and maintenance fee which has both a fixed and variable component. The fixed component is a standard monthly rate and the variable component is a function of the production rate of the facility.

WHAT WERE THE PROCUREMENT ARRANGEMENTS?

- Two separate contracts were awarded; one for the construction of the facility and the other for the operation of the facility

In a competitively negotiated procurement process, RISWMC issued a Request for Proposal (RFP) for two separate phases of the project. The first phase of the project was the construction of the facility and the second phase was for operations of the facility. After reviewing the responses NECRInc was awarded a three year contract to operate the resource recycling facility.

WHAT WAS THE DIVISION OF RESPONSIBILITIES?

Rhode Island Solid Waste Management Corporation (RISWMC)

- Own recycling facility and the land on which it is located
- Arrange for the financing of the facility
- Provide for delivery of materials to the facility

WHAT WAS THE DIVISION OF RESPONSIBILITIES? (Continued)

New England Container Recovery Company (NECRInc.)

- Operate and maintain the recycling facility
- Install processing equipment

WHY WAS THE PROJECT SUCCESSFUL?

- Public Education
- Favorable market conditions

RISWMC, in conjunction with the Department of Environmental Management, has invested considerable time, effort, and money to educate the public on pertinent solid waste issues. A fotmalized program entitled Ocean State Cleanup and Recycling (OSCAR) sponsors seminars in which the public is provided a tour of the facility and given literature regarding the importance of recycling.

Two market forces can help to explain why this recycling project was successful. The first is that the costs to collect and process material at the MRF (materials recycling facility) is comparable to the cost of disposal through a resource recovery facility and it reduces the impact on quantity of material to be landfilled. The second is that in spite of the relative softness of the paper market (RISWMC has been successful in selling all newsprint recovered to date), the other recovered materials enjoy a steady demand and ever increasing attention from a variety of companies interested in using recovered raw materials for their manufacturing processes.

LESSONS LEARNED

The utilization of a full service vendor to provide contract services can greatly improve the efficiency of a project. This project had four separate contractors: one to design the site and building, two to develop the site and construct the building, and one to install the process equipment and operate the facility. RISWMC experienced difficulty with the division of responsibilities between several contractors, and strongly advises that if the procurement approach is used by other public entities, close attention to coordination and information exchange be provided. This coordination and its attendant risks may be significantly reduced by employing a full-service contractor.

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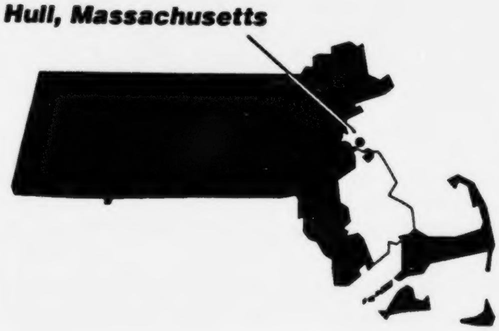
WASTEWATER

Contract Services

WASTEWATER TREATMENT FACILITY

HULL, MASSACHUSETTS



- **The Town of Hull contracts with Metcalf & Eddy Services, Inc. for operation and maintenance of its sludge treatment facility and cleaning of the Town's sewer collection system.**
- **Metcalf & Eddy's ability to provide extensive operational and maintenance support and to hire well-qualified personnel have led to a successful public-private partnership.**

SUMMARY

In the mid-1960s, EPA ordered the Town of Hull to stop its dumping of sewage into the Atlantic Ocean. Through several private contractors, the Town designed and built a sewage treatment facility for which 90% of the capital costs were paid by EPA and the Commonwealth of Massachusetts. Under the management of Hull, the treatment facility (completed in 1978) was plagued by flooding, poor preventative maintenance programs, inadequately trained personnel, and lack of financial support from Hull residents. In January 1988, after a competitive bidding process, Hull awarded a contract to Metcalf & Eddy Services, Inc. for the operation and maintenance of the wastewater treatment facility and its six associated pumping stations. The facility is in full operation, and all equipment is on-line. Since the partnership began, the Town has not been assessed any fines for failure to meet environmental regulations.

PARTIES INVOLVED AND TIMEFRAME

Public Partner	Town of Hull, Massachusetts
Private Partner	Metcalf & Eddy Services, Inc.
Population	10,500 (year round) 20,000 (summer) 80,000 (summer weekends)
Average Income (1987)	$18,222
Form of Government	Board of Selectmen Town Manager
Project Initiated	January 1988
Project Completed	June 1993
Total Capital Cost	N/A

WHY WAS A PRIVATE PARTNER CHOSEN/OTHER ALTERNATIVES

The wastewater treatment facility suffered from extensive damage caused by flooding during the "Great Blizzard of 1978." Under the Town's management, the extensive flood damage was compounded by a poor spare parts inventory, poor financial support from the Town, lack of preventative maintenance programs, and, most significantly, inadequately-trained personnel. Under Massachusetts labor laws, it is very to difficult to fire workers; therefore, the Town believed the only option available was to turn to a private organization with the knowledge, reputation, resources, and benefits to attract qualified people.

WHAT WERE THE FINANCING ARRANGEMENTS?

To pay Metcalf & Eddy (M&E) for its services, the Town of Hull's Sewer Commission assesses user fees and obtains a portion of the income generated by the Town's leachate treatment and landfill services.

During the first year of the partnership, the money to pay M&E was included in the Town's budget. Currently, the Town pays operational expenses with user fees collected from residents and commercial enterprises. The fees are based on water usage and are assessed twice a year. The residential and commercial rates on which the fees are based are the same. The average fee is $126 (for six months).

User fees account for nearly 80% of the costs of operating and maintaining the facility and its six pumping stations. Additional income from the Town's leachate treatment and landfill services covers the remaining costs.

In the first 18 months of the contract, the Town paid M&E $45,000 a month. After 6 months, the commission added $4,125 to the monthly payments in order to finance the up-front corrective maintenance required to put the treatment facility and the six pumping stations in proper working order. While the $45,000 monthly cost is adjusted every July 1st, the additional $4,125 per month remains the same for the life of the contract.

WHAT WERE THE PROCUREMENT ARRANGEMENTS?

The Chief Facility Manager of the Hull wastewater treatment facility consulted with professionals from Tighe and Bond, a private engineering firm based in Westfield, MA, to develop a Request for Proposals (RFP) for the operation and maintenance of the facility. In June 1987, the Sewer Commission issued the RFP; in December 1987, the Commission entered into a five-and-a-half year contract with Metcalf & Eddy. Although M&E bid second highest, its track record with other public agencies and its ability to provide extensive support and services led to its being awarded the contract.

Among the requirements of the contract were that M&E retain Town employees; however, at the time of M&E's takeover, only two Town employees remained, both of whom left M&E after two months. M&E is also responsible for making sure that the facility meets all environmental regulations. If fines are assessed, M&E must pay them.

In July 1989, the Sewer Commission amended the contract to include cleaning of the Town's sewer collection system.

WHAT WAS THE DIVISION OF RESPONSIBILITIES?

Town of Hull, Massachusetts

- Own wastewater treatment facility, the land on which it is located, and six associated pumping stations
- Arrange financing of the contract services

Metcalf & Eddy Services, Inc.

- Operate and maintain the wastewater treatment facility and six associated pumping stations
- Clean sewer collection system
- Pay any fines assessed for failure to meet environmental regulations

WHY WAS THE PROJECT SUCCESSFUL?

This partnership's success results from several factors. First, the Town's Chief Facility Manager has established a good working relationship with M&E — communication lines are open. Second, the Chief Facility Manager has the authority to make decisions concerning the operation and management of the facility. Third, through privatization, it has been possible to hire well-trained personnel to run the facility. Finally, no state or local legislation or regulation stood in the way of Hull's establishing a public-private partnership.

LESSONS LEARNED

Educating the public to the need for and costs of environmental service is essential. The public believes that wastewater treatment is inexpensive and easily implemented. In this case study, the Hull Sewer Commission did not have a spokesperson to explain the costs and complexities of sewage treatment to the public. As a result, the Town's early sewage treatment services lacked public financial support.

Furthermore, it is extremely important to consult experts when seeking to hire. The success of a project depends largely on the quality of people working on it. Experts know best how to judge qualified personnel and firms.

Obtaining a reputable private partner that meets stringent requirements (in the contract and RFP) is a necessity. A reputable private partner has a proven track record and wants to stay in the business of environmental service. Thus, the private partner takes its accountability to the public seriously and will provide good service.

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Panel Session

Alternative Financing Mechanisms: Dedicated Fees

Speaker

William Nuzzo
Water Management Division
U.S. Environmental Protection Agency
Region 1

States' Share of Environmental Protection Costs are Increasing

As the U.S. Environmental Protection Agency and the states move into a new phase of water program management, an increasing share of the funding burden likely will fall to the states. Several factors contribute to this: New requirements under the Clean Water Act and the Safe Drinking Water Act place additional responsibilities on the states; approximately 50 percent of the federal funds that states used to support their water quality based programs in 1988 will disappear by 1995 due to the termination of EPA's construction grants programs and set-asides from them; the federal deficit makes new federal funds difficult to obtain; and the Tax Reform Act changed the attractiveness of some infrastructure financing mechanisms.

To fill the gap, we need new solutions and new partnerships to support state efforts to finance the protection of water resources. These panel sessions on alternative financing mechanisms seek to identify some of these solutions and partnerships that states have developed to address their growing financial needs. The specific mechanisms we will cover include fees, fines and penalties, and management and revenue funds. In each session, we will have a presentation from a national pacesetter state, experienced in the use of the particular financing mechanisms as a supplement to the state's general revenue funding for environmental programs.

Our states in New England have already begun using a number of alternative financing mechanisms to fund water programs. Where relevant, there will be presentations from them in each of the three sessions to relate their approaches as well as the potential application of additional mechanisms under development.

We have also arranged for presentations during these sessions to discuss in general terms the use of dedicated fee systems, dedicated taxes and fines, and management funds to support enviromental programs. As we listen to our presenters, we need to learn from their experiences how best we can create new solutions that can critically respond to a state's expanding and increasingly complex water program. These solutions are necessary due to the inflexible and somewhat uncertain future of general revenue funding and budget deficits. Alternative financing mechanisms not only provide new revenue sources, they can also creatively link the type of financing approach taken to the specific water program it supports.

Moderator

Dean Marriott
Commissioner
Maine Department of the Environment

This panel will discuss dedicated fee systems in use by four states: New Jersey, Massachusetts, Connecticut, and my own State of Maine. In Maine, expenditures for environmental programs have increased from around $5 million in 1980 to nearly $18 million in 1989. Along with the increase in expenditures, the use of dedicated funds as a revenue source has grown from a little under $1 million to nearly $8 million.

In 1989, of the Department's budget sources:

- 35 percent came from the state's general fund,
- 22 percent from federal funds, and
- 43 percent from dedicated funds.

Although more than one third of the Department's budget currently comes from the state general fund, this amount represents only 0.38 percent of General Fund expenditures in FY 1988. Over the 19 years that the Department has been operating, it has averaged state support of less than 0.5 percent of the total General Fund budget.

Environmental Programs in Maine Supported by Alternative Financing

To obtain the additional revenues it needs to meet its expanding responsibilities, Maine has looked to alternative financing mechanisms that yield dedicated funds for environmental programs. Funds currently in use in Maine are:

- Maine Environmental Protection Fund,
- Dam Registration Fund,
- Laboratory Special Revenue Fund,
- Hazardous Waste Fund,

- Surface Oil Clean-up Fund,
- Ground Water Oil Clean-up Fund, and
- Dedicated funding for the Radioactive Waste Commission.

Finding sources for fee collection like those mentioned above often require:

Steps in Finding Sources for Fees

- Looking at what sources provide revenues to the General Fund (e.g., enforcement penalties);
- Examining the services the Department is providing (e.g., information about existing or new regulations, and advice on their impacts); and
- Identifying how either of these can become dedicated sources of revenues to support departmental activities.

Lessons from the Maine Experience

There are several conditions under which fees have worked best for the State of Maine. It has been useful to adopt fee structures in the statute, not just the authority to charge fees. This allows the hard questions of who should pay how much to be negotiated at the outset when commitment and attention is the greatest, rather than afterwards when interests have shifted or waned. Dedicated funding programs have received start-up money to initiate the program, before any dedicated funds can be collected. Finally, the fee system requires close and effective management. Staff duties should include:

- Preparing fiscal and revenue projections and tracking expenditures;
- Developing fees with inflation adjustments; and
- Using automated fee tracking systems to ease oversight and fees management.

Most importantly, an effective fees program depends on the organization knowing its program needs and the sources of fees in order to manage revenue to meet the accurately measured costs of operating the program.

Speaker **Arnold Shiffman**
Assistant Director
Ground Water Quality Management
Division of Water Resources
Department of Environmental Protection
New Jersey

New Jersey uses a number of fee systems to support its environmental programs. They include:

Environmental Programs In New Jersey Supported By Alternative Financing

- A spill fund that serves as a dedicated tax on large petroleum product storage facilities and finances both clean up and program costs;
- A dedicated water tax on public water supply systems to fund safe drinking water programs;
- One time permit fees for construction approvals for sewer and underground storage tank construction; and
- Yearly permit fees for the New Jersey Pollutant Discharge Elimination System (NJPDES).

Elements of the New Jersey Pollutant Discharge Elimination System Fee Program

My discussion will focus on the last of these that I have mentioned: the NJPDES and its fee system. The fees are:

- **Established by regulation, not by the legislature;**
- **Deposited in a general fund and must be annually appropriated back to the program. However, they are earmarked only for the program;**
- **Collected through permits which can be revoked for nonpayment;**
- **Based on the estimated cost of the program, not the service cost of individual permits. The state keeps track of program costs to establish a budget, but not to justify an individual permit fee.**

Shortly after the NJPDES fee system was established, the courts overturned the New Jersey fee system because it purported to, but in actuality did not, include environmental risk, e.g., a pound of sand discharged would cost as much as a pound of dioxin. This court ruling for the first time established the polluter pays principle — that those who do the most to create injurious conditions should bear a

Laws Valid if They Scale Fee Proportional to Change

greater burden of regulatory costs. The court went on to say that if the challenged regulation actually scaled the fee structure proportionate to the degree of harm threatened by the permittee's discharge, the court would have no problem sustaining the validity of the regulation. The fees are now proportional to the degree of risk threatened by the discharge, and this has been upheld by the New Jersey Supreme Court. The fees are assessed on the public and private sectors, exempting only schools and religious organizations.

In terms of the scope of the NJPDES, New Jersey has about 2,000 permittees, and fees are relatively large. The annual fee is about $8,000; however, permit fees range from $500 to about $500,000. There is no maximum fee limit. The fees cover surface water and ground water pollution control activities such as permit issuance, compliance monitoring, pretreatment, and enforcement. The program currently employs 246 people (FY 1990), about 2/3 for the surface water and 1/3 for the ground water program. Over time, the permit fees have been routinely substituted for inadequate or decreasing federal grants and state general funds. The size of the budget and the level of fees has recently caused resistance from permittees. The program budget can no longer be significantly increased without a proportional increase in the number of permittees.

Speaker

Savos Danos
Assistant General Manager
Littleton Light and Water Department
Littleton, Massachusetts

Littleton, Massachusetts (population 7,000) has experienced rapid industrial and commercial growth over the last ten years. The industrial development in and around Littleton poses some risk to ground water supplies, the sole source of the Town's drinking water.

Environmental Programs in Littleton, MA Supported by Alternative Financing

To protect its sole source aquifer, Littleton adopted a comprehensive wellhead protection by-law in 1981 that creates special protection areas for wellfields and aquifer recharge areas. All residents pay property taxes to support site plan performance controls. Residents using town water and real estate developers finance the installation of monitoring wells and the testing of samples from those wells through water bills and reimbursements to the Town, respectively.

The by-law creates four Aquifer (wellhead protection) Districts and two Water Resources (aquifer protection) Districts. Commercial and industrial facilities are subject to engineering and site performance controls within these districts to allow the Department to manage the risk involved with their activities.

Monitoring is Reimbursed Through Fees from Permittees

The by-law requires each industrial and commercial permittee in the Aquifer and Water Districts to install monitoring wells and reimburse the town for monitoring expenses. Of the $80,000 annual cost for monitoring, $70,000 is reimbursed through fees from permittees. The Department oversees the installation of wells and collects and tests samples semi-annually, submits results to the health department, and invoices the owners for the cost of the testing.

In sum, monitoring is the most costly activity in the Wellhead Protection Program, averaging from $400 per year for sites with only one well to $10,000 per year for sites that require as many as seven wells and testing for a large number of potential contaminants.

Speaker

Ken Hagg
Deputy Commissioner
Department of Environmental Protection
Massachusetts

There are two recent developments to share with you on the subject of dedicated funding in Massachusetts. They are the Commonwealth's hazardous waste oversight cost recovery program and the Toxics Use Reduction Act.

The hazardous waste oversight cost recovery program is neither a fee nor a tax. It involves charging potentially responsible parties (PRPs) for the Department's hourly and fringe cost of overseeing PRP clean-up efforts. It is important to remember that PRPs are not the polluter; they are just the entity currently holding the property where the hazard is located. This cost recovery program is being challenged in court as an unconstitutional tax.

The Toxics Use Reduction Act is a new law, developed cooperatively by government, industry, and interest groups. Passing this law without a funding mechanism would have posed difficulties in establishing how to pay for the program. The law has expedited the Department's efforts to implement the program by setting a fee structure and making provisions for its management and any future adjustments. The legislature also provided start up funds for the program to ensure there would be no delays in carrying out the law's provisions.

Dedicated Fees Can Become the Primary Source of Program Revenues

Programs like these have created a greater reliance on dedicated fees, so much so that they no longer supplement general revenue funding for some programs, but rather serve as the primary source of revenues.

Lessons from the Massachusetts Experience

Massachusetts' efforts to develop dedicated funding for its environmental programs have involved two key elements:

- The Department of Environmental Protection has examined in detail what new revenue generating alternatives are available in each of its environmental programs.

Massachusetts has concentrated on resource protection, waste prevention, and waste site clean-up. But in fact, there can be numerous fee mechanisms open to government. One way would be to develop a single facility fee to cover all pollution prevention and protection efforts at a facility, not just for single resource protection services.

- It has also examined ways to work more efficiently, in the face of constrained resources.

This has involved seeking advice from environmental groups and the private sector on how the Department can better operate its programs. Both of these efforts — identifying additional revenue sources and working more efficiently — will help the Commonwealth meet its goal of continuing to provide needed environmental programs in a cost effective way.

Various Types of Fees

Fee	Definition	Example
Permit	Charge for permits issued by government	One time permit fees for construction of underground storage tanks (NJ)
Application	Charge for processing an application for a permit/variance	Landfill application processing fee
Installation	Charge for the installation of equipment	Installation charge for environmental control technology
Construction	Charge for the review of construction plans of system plans	Public Water Supply System Review
Discharge/ Disposal	Charge for the discharge of disposal materials	Industrial Waste
Monitoring/ Sampling Lab	Charge for monitoring operations, sampling water supplies, and laboratory analysis	Water quality monitoring fee
Impact	Charge for the incremental burden/impact placed on public services by new development	Developer fee for new residences

Region 1 Luncheon Address

Speaker

LaJuana Wilcher
Assistant Administrator
Office of Water
U.S. Environmental Protection Agency

Adequate Funding, an Environmental Ethic, and Cooperation are Three Critical Elements Needed to Ensure Effective Programs

I appreciate the opportunity to be here today to discuss ways we can ensure that we have enough money to accomplish the very important goal of protecting the environment. Funding for environmental programs is one leg of a three-legged stool. The other two legs are an environmental ethic or public awareness to protect and preserve the environment and cooperation among all levels of government, industry and the public at large. If any of these legs are weak, the stool cannot adequately provide support.

It hasn't been that long since the major problem for environmental protection was too few people understanding that a problem even existed. America grew up with a frontier ethic and a sense that the country was so vast and so abundant that we didn't have to protect or preserve our resources.

Today, I believe the American people are becoming keenly aware that pollution is a problem. Now, we have to get them to support the idea that environmental protection is an ethic, one that will require changes in lifestyle, changes in thinking, and of course money.

You are to be commended for this type of collegial effort that is absolutely necessary for us all to do our jobs during the next few years. This frames our mission, which President Bush has called the "New Spirit of Environmentalism."

During these next several years, the President and Bill Reilly intend to focus the Agency on the following priorities:

Presidential and Agency Priorities for Environmental Protection

- **Pollution prevention;**
- **Cooperation with Congress, state and local governments, and other federal agencies;**
- **Protection of important habitats, especially sensitive aquatic and marine systems;**
- **A higher degree of international activity and coordination; and**
- **An emphasis on science and surface waters.**

As many of you know, the Office of Water at EPA initiated the State Funding Study in May of 1988. The concern was that due to recent legislative changes in the Clean Water and Safe Drinking Water Acts, states are having to implement many new water program activities with little new federal money to help them do so. The Funding Study worked with a task force of state and federal officials which made recommendations on three major issues.

State Funding Study Recommendations

- **Alternative state funding mechanisms need to be increased to support the administrative and operating costs of state water quality and drinking water quality programs;**
- **Additional criteria for federal support of state water programs must be developed; and**
- **Institutional, management, and regulatory changes at the federal and state level must be made to save money.**

The recommendations of the study are now out for public comment. I would be most interested in your comments and additional suggestions.

This morning Charlie Grizzle discussed another source of alternative financing that we are encouraging, one that as many as 45 or more communities in New England are taking advantage of — public-private partnerships. Many forward-thinking communities are providing us with excellent examples of such partnerships. They are successfully applying private sector resources and ingenuity to meet their environmental capital financing needs.

We must overcome Barriers and create Incentives for Funding Alternatives

We need to work together to address impediments to — and create incentives for — the successful implementation of innovative funding alternatives, including public-private partnerships. At times our interests will clash, due to different priorities, constituent demands, or other reasons. But there is one area where our interests should never differ — that is, doing all we can to find new ways to pay for our environmental programs and projects.

We have a tremendous challenge ahead of us. We can meet this challenge if we are a united group working for one goal, that of protecting our environment. Success will require close cooperation with all levels of government, with the private sector, and with concerned citizens and community groups. In order to succeed, we must usher in a new era of reconciliation and cooperation, of responsiveness, and flexibility. Where innovation is needed, we must discover it; where flexibility is needed, we must fashion it; and where assistance or relief in meeting regulatory requirements is needed, particularly in small communities, we must seek the appropriate remedies.

Close Contact with all Participating Programs Will ensure Consistent Implementation

Over the coming months and years we will stay in close contact and work cooperatively with EPA's Regional offices, state and local authorities, and our colleagues in other federal agencies to ensure consistent and fair implementation of EPA's regulatory programs.

Panel

Environmental Financing Through Public-Private Sector Channels

Moderator

Larry Scully
President
Scully Capital Services

Introduction

Alternative financing methods and public-private partnerships are powerful tools that can be utilized to meet the increasing cost of environmental protection. This panel will array the options that are available to promote the successful implementation of alternative financing mechanisms for federal, state, and local environmental programs and the private sector's involvement in providing environmental services.

Speaker

George Ames
Executive Director
Council of Infrastructure Financing Authorities

The decline in the level of federal subsidies along with the simultaneous increase of spending on environmental programs produces a funding gap. This revenue shortfall occurs because the cost of environmental protection exceeds the current ability to pay for it. The continuing passage of more stringent federal environmental legislation exacerbates this problem because it requires state and local governments to expand and upgrade their environmental programs to comply with new standards.

The Fiscal Impacts from Paying for Additional Programs should be Known

Given the increasing demand for environmental services and the public's willingness to support new and more stringent environmental legislation, the issue is how are we going to pay for all the programs that we have deemed necessary. The fiscal impacts of this situation are determined at two crucial points:

- When environmental legislation is initially developed, and
- When the proposed rules are issued.

Although the economic implications of legislation are largely determined when the legislation is drafted, little formal evaluation is made of the true costs of legislation.

Problems for Small Communities

This lack of systematic review of the financial costs of legislation, coupled with limited flexibility in complying with the legislation, is particularly troublesome for small communities who often do not have the funds necessary to comply with the legislation. These small communities often are faced with a dilemma: they do not have the money on hand and thus need to seek outside financing, but they find it difficult to secure outside financing because they have little or no collateral.

An additional problem associated with the language of the legislation is that its interpretation and operation affords state and local governments a significant amount of discretion when implementing programs. Thus, many of the goals and objectives that the legislation intend are not realized because they were not made explicit.

Many strategies can be used to entice private sector involvement in providing environmental services. The lack of tax incentives, coupled with the large amount of risk associated with many environmental programs has deterred greater private participation.

Strategies to Encourage Private Sector Participation

Finally, strategies that the public can adopt that will encourage private sector participation include:

- **Reducing the term of loans;**
- **Deferring debt payment until revenues are realized; and**
- **Providing guarantees for local bank loans.**

Speaker

F. Charles R. Hindmarsh
Vice-President
State Street Boston Capital Corporation

As an investment banker, I will speak from an equity perspective. I feel the equity perspective should be stressed because of the high level of risk that is associated with it. The willingness of the private sector to devote its resources to public projects is directly related to the risk associated with equity.

Factors Deterring the Private Sector from Getting Involved

Several factors that influence the private sector's decision not to get involved in the provision of public services include:

A bad prior experience. Many private firms avoid financing public projects because of a bad prior experience.

The intervention of third parties (e.g. the Department of Labor and the Inspector General's office). Although these oversight agencies have a role to play that ensures fairness, their formal procedures impose complex reporting and disclosure requirements that make an already complicated transaction even more complex.

Municipal government barriers. Not only do federal agencies present road blocks for the private sector, municipal governments also are a source of impediments. Examples of local government impediments include: conservative commissioners, opposition from zoning and planning commissions, and citizen opposition to projects.

Propaganda generated by environmental and community groups. These organizations are often responsible for distorting the facts that can sway public opinion. Given public opposition to a project, firms that were originally interested in the project avoid it because of the potential for bad public relations.

Legislative and regulatory barriers. These include the stringency of existing state and federal environmental regulations and regulations that are still evolving. The latter are of even more concern to the private sector because of the uncertainty regarding the cost of compliance and legal liability.

To Encourage Participation, Risk must be Equitably Divided

In order for the private sector to enter this market there has to be a more equitable division of the project's risks and a reward that is commensurate with the risks. Uncertainty in these projects can result from many sources. A few of these sources include: increase in capital costs, change in the law, and unforeseen construction delays (such as inclement weather and strikes).

If the private sector is going to provide environmental services, despite the previously mentioned disincentives, the length of the service will need to be long (20 years or more) and the communities involved need to be creditworthy.

Critical Need for Private Sector Involvement

Another component of service contracts is the payment of obligations assumed by the public sector. It is recommended that the payment to the private sector be composed of both a fixed and variable component. The fixed component provides a minimal level of guaranteed payment and reduces the amount of uncertainty that the private partner has to assume. The variable component provides the private sector with an incentive either to operate the facility more efficiently or expand the level of operation, which would result in a net growth of revenue. This net growth in revenue would benefit both the private and public partners. The need for the private sector to become involved in the provision of environmental services and public works projects is critical given the increasing demand for environmental services and an aging public works infrastructure.

Speaker

Robert Lenna
Director
Maine Municipal Bond Bank

Through the use of a state-wide survey, Maine has documented the public's willingness to pay for increased levels of environmental protection. When asked what they felt was the number one priority that needed to be addressed, the citizens of Maine cited increased environmental protection.

Like the citizens of Maine, the nation has developed a powerful environmental consciousness, but this is only half of the battle in protecting the environment. The remaining half of the battle is finding the funding to pay for the programs that will meet the increased demand for environmental services. The State of Maine estimates that it will cost over $500 million during the period from 1989 to 1994 to comply with the Safe Drinking Water Act and the Clean Water Act amendments.

Bond Banks Secure Funding for Small Communities

One way for governments, especially those small in size, to gain access to the capital markets is through bond banks. A bond bank functions as an honest broker for municipalities and national capital markets. These entities can pool the collective interests of many small towns and districts and use it to secure funding that would have otherwise been unavailable.

The money secured for these communities will be used to finance small scale environmental infrastructure projects. Small communities experience difficulty in single-handedly trying to obtain financing because they are either too small to qualify for a bond rating or lack sufficient collateral to secure loans.

Many of the Barriers to Providing Adequate Funding to meet these Needs are Legislative

The barriers that are present in these service agreements are partially attributable to legislative restrictions, particularly limitations enumerated in the tax code. The types of service agreements authorized by the legislation are subject to financial, legal, and management practice constraints imposed by agencies such as the Internal Revenue Service, the Department of Justice, and the Treasury Department. Such agencies have a profound effect on the access that governments have to capital markets and on the incentives that are present to induce private sector capital use in financing public projects.

Speaker **Jim Dobbs**
Vice President and General Counsel
Metcalf and Eddy

It is important to realize that despite the fact that fees can be used to close the shortfall between environmental program costs and current sources of revenue, they are not a panacea. Fees represent a limited source of funding and relying too heavily on them would be a mistake.

The key to success for initiatives like public-private partnerships is the ability to raise private equity to support state and local financing efforts. Discussions on Capitol Hill are attempting to address the ambiguities of financing public projects and the flexibility needed for the private sector to participate in financing schemes. Some of the measures under consideration are:

Congress is Addressing a Number of Ways to Ensure that Private Equity can be Raised

- **Credit enhancements;**
- **Rapid depreciation;**
- **Infrastructure tax credits;**
- **Tax exemptions; and**
- **The use of facilities as security to pledge for additional revenues.**

Finally, states and localities must look beyond the simple issue of cost when considering how to add to or replace its infrastructure. Risk and life cycle costs are important factors when deciding what to build. The cheapest is not necessarily the best to ensure long term use.

There is great interest from the private sector in EPA's Public-Private Partnerships Initiative. Private firms are ready to raise the necessary capital, but the public sector needs to identify and remove the road blocks before significant infusions of private sector capital can take place.

Panel Public-Private Partnerships: Privatization and Developer Financing

Moderator **Carol Ansheles**
Manager, Solid Waste Program
New England Waste Management Officials Association

This afternoon's session on partnerships includes two presentations: one on privatization and one involving developer financing. With us to speak about Bristol, Connecticut's Solid Waste Resource Recovery Facility is Jonathan Bilmes, its manager. David Sweet, Superintendent of the Kennebunk, Kennebunkport, and Wells Water District, will then discuss his district's efforts to arrange for developer financing to support increased drinking water services.

Case Studies:

Bristol, CT
Resource Recovery Facility
(Mass-Burn Incinerator)
PRIVATIZATION

Jonathon Bilmes
Manager
Bristol Resource Recovery Facility

Kennebunk, Kennebunkport and Wells, ME
Drinking Water Supply
DEVELOPER FINANCING

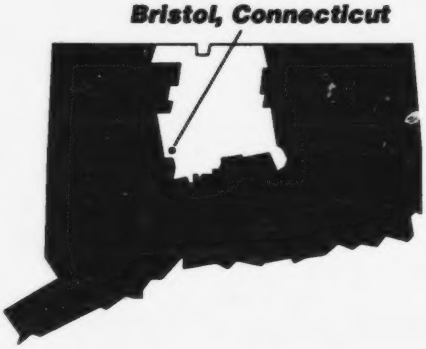
David Sweet
Superintendent
Kennebunk, Kennebunkport and Wells
Water District

SOLID WASTE

Privatization

RESOURCE RECOVERY FACILITY (MASS-BURN INCINERATOR)

BRISTOL, CONNECTICUT



- **Communities worked together to reach a privatization arrangement with Ogden Martin to design, construct, operate, and own a resource recovery facility.**
- **The facility was financed by tax-exempt revenue bonds issued by the Connecticut Development Authority.**
- **Bristol receives tax revenues from the facility and fees from 10 other communities using the facility; tipping fees are reduced by revenues from the sale of electricity generated.**
- **Ogden Martin completed construction of the facility under budget and 2 months ahead of schedule.**

SUMMARY

Connecticut communities worked together in a regional effort to build a resource recovery facility. Eight communities entered into a privatization agreement with Ogden Martin Systems of Bristol, Inc. to build, operate, and own the facility. Subsequently, three other communities joined. The Connecticut Development Authority issued tax-exempt revenue bonds to finance the project. A bond trustee, the Connecticut Bank and Trust Company, collects and disburses revenues from the facility.

The communities formed the Bristol Resource Recovery Facility Operating Committee (BRRFOC) to oversee operation of the facility. Participants agreed to provide a minimum tonnage of waste each year. Their tipping fees are offset in part by revenues from the sale of electricity to Connecticut Light and Power.

PARTIES INVOLVED AND TIMEFRAME

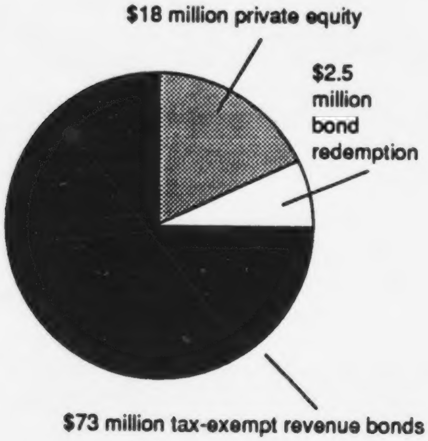
Public Partner	Eleven Connecticut communities
Private Partner (owner)	Ogden Martin Systems of Bristol, Inc.
Population	62,410 (Bristol, 1988)
Median Household Income	$19,357 (Bristol, 1979)
Form of Government	Semi-Strong Mayor (Bristol)
Project Initiated	May 1984
Project Completed	May 1988
Total Capital Cost	$66 million

WHY WAS A PRIVATE PARTNER CHOSEN/ALTERNATIVES CONSIDERED?

- Private partner had experience with sophisticated mass burn technology
- Private partner was considered more efficient
- Private partner accepted performance risks

A study by independent consultants selected mass-burn technology. The City of Bristol agreed to provide a site near its landfill to build a resource recovery facility, but was not interested in ownership. The communities chose private ownership because they decided that an experienced private company would be more efficient and accept performance risk for the project. The communities worked together to select a private partner to build, own, and operate the resource recovery facility located in Bristol.

WHAT WERE THE FINANCING ARRANGEMENTS?



The Connecticut Development Authority issued $73 million in tax-exempt revenue bonds to finance the facility. The 29-year bonds are backed by revenues from the facility and guaranteed by Ogden Martin. Ogden Martin contributed $18 million. As the facility did not cost the full amount of the bond issue, $2.5 million in bonds were redeemed after the facility was completed.

Revenues from the facility are deposited in a revenue account with the Connecticut Bank and Trust Company, which acts as bond trustee. Ogden Martin bills the BRRFOC monthly, which then pays the bond trustee from payments received from the participating communities. The City of Bristol receives a fee from each community through the bond trustee.

WHAT WAS THE DIVISION OF RESPONSIBILITIES?

WHAT WERE THE PROCUREMENT ARRANGEMENTS?

- An RFP was issued and Ogden Martin was chosen through competitive negotiation

The City of Bristol issued an RFP, and in conjunction with the other communities, selected Ogden Martin through competitive negotiation. The communities signed a contract with Ogden Martin to build and operate the facility. Through an interlocal agreement, each of the communities agreed to provide a minimum tonnage of waste per year.

City of Bristol

- Sell the land for the facility to Ogden Martin
- Operate a landfill for disposal of process residuals

Connecticut Development Authority

- Issue bonds to finance the facility

Connecticut Bank and Trust Company

- Collect and disburse revenues from the facility

Bristol Resource Recovery Facility Operating Committee

- Set policy and oversee operation of the facility
- Provide a minimum tonnage of waste per year through an interlocal agreement

WHAT WERE THE PROCUREMENT ARRANGEMENTS? (Continued)

Ogden Martin Systems of Bristol, Inc.

- Design, construct, own, and operate the resource recovery facility
- Secure environmental permits
- Comply with environmental permit requirements
- Contract with Connecticut Light and Power to purchase electricity generated

HOW WAS THE PROJECT IMPLEMENTED?

- Bristol conducted a study to evaluate the potential for resource recovery
- State legislation authorized the communities to issue contracts for solid waste management
- The communities created the BRRFOC

Bristol hired independent consultants to evaluate the potential for a resource recovery facility. Independent consultants assisted in selecting and negotiating with the private partner.

The state passed special legislation in 1985 allowing the communities to join together in a contractual relationship to manage solid waste disposal. The original eight communities worked informally to sign an agreement with Ogden Martin. After the project started, another three communities became involved. In September 1987, the communities agreed formally to create the BRRFOC. The BRRFOC is made up of community officials from the 11 communities and meets monthly to oversee operation of the resource recovery facility.

WHY WAS THE PROJECT SUCCESSFUL?

- Independent consultants
- Financial incentives to site facility
- Citizen involvement
- State law requiring public utilities to purchase electricity generated

Independent consultants provided valuable technical, legal, and financial advice. Negotiating an agreement that protects the interests of all parties involved facilitated cooperation among communities. Included in the agreement are financial incentives for Bristol to locate the facility within its boundaries. Bristol receives a fee from the other communities and Ogden Martin is the second largest source of tax revenues for the city.

Another factor contributing to the success of the project was citizen involvement. A Citizen's Advisory Committee, formed during construction of the facility, distributed information to the public and helped raise support for the project.

A state law requires that public utilities purchase excess energy from resource recovery facilities. As a result, there was easy access to a market for the electricity generated by the facility.

Local governments can work together successfully for a regional solution to solid waste management. Careful negotiation can result in an agreement that protects the interests of each party involved and provides financial benefits to the communities. Direct input by community officials kept the communities closely involved and committed to the project.

CONTACT

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DRINKING WATER SUPPLY

Developer Financing

KENNEBUNK, KENNEBUNKPORT and WELLS, MAINE WATER DISTRICT UTILITY

KENNEBUNK, MAINE

- **The Kennebunk, Kennebunkport and Wells, Maine Water District (public partner) established a developer financing arrangement to support increased water services.**
- **Financing for the expansion and enhancement of the water system is obtained on a continual basis by the collection of an impact fee from new developers and customers. The finance arrangement is known as the "System Development Charge."**
- **New water utility customers contribute monies to support construction requirements in exchange for water services. The Kennebunk District secures needed permits, designs, constructs, owns, operates, and maintains the Utility, and accepts the responsibility for monitoring performance and assuring compliance with state and federal regulations.**

SUMMARY

The Kennebunk, Kennebunkport and Wells, Maine Water District worked long and hard to pass legislation allowing them to collect a System Development Charge for the purpose of financing required new construction to support increasing water demands. This area is a long coastal, tourist region with a rapidly growing population and increasing requirements to supply more and more water to the District. This facility exclusively services the Kennebunk, Kennebunkport and Wells Water District (population: 20,000) and portions of two other communities.

Developers and new customers of the Utility finance their own water needs by paying a System Development Charge. Kennebunk, Kennebunkport and Wells Water District is in charge of collecting this impact fee from anyone adding demand to the system by increased usage or physical expansion requiring increased usage — this could be industry, commercial businesses, or individual residents. Fees are used for various projects, e.g., pipeline construction, storage construction, or pumping services. Legislation was passed in 1986, and the collection of System Development Charges began — and continues today as more and more new customers move into the Kennebunk area.

PARTIES INVOLVED AND TIMEFRAME

Public Partner	Kennebunk, Kennebunkport and Wells, Maine Water District
Private Partner	New water supply customers, i.e., Industry, commercial businesses, and individual residents
Population (Kennebunk Area)	20,000
Median Household Income	$25,000 (approximation)
Form of Government	Quasi Municipal District with 4 elected trustees
Project Initiated	1984 (to obtain legislation) 1986 (to collect fees)
Project Completed	On-going
Total Capital Cost	$13,985,000 (1989) revised annually

WHY WAS A PRIVATE PARTNER CHOSEN/OTHER ALTERNATIVES

The first alternative considered, but rejected, was for the District to borrow funds (paying interest), improve the utility, and then pass along the charges to all customers through increased rates or a surcharge.

The Kennebunk District decided that the collection of the System Development Charge was a more reasonable and equitable approach, since only the new customers are charged for the new/added services. This choice has another added benefit — the District earns interest on the fees collected, and re-applies those earnings to improving services.

This arrangement aids in planning for the water supply requirements of the future since needs are identified prior to construction.

WHAT WERE THE FINANCING ARRANGEMENTS?

- Private developers and customers financed the project

The Kennebunk District collects a System Development Charge from private developers and other customers requiring new or increased water supply services. Those monies are used to pay for various projects that need to be completed to accommodate future growth. The monies are placed in an interest bearing account, and both the principal and interest are used to replace spent resources.

This fee is collected from the customer before turning on the water.

WHAT WAS THE DIVISION OF RESPONSIBILITIES?

The District of Kennebunk, Kennebunkport and Wells, Maine

- Decides to build, design, construct, own, operate, and maintain the Kennebunk, Kennebunkport and Wells Water District Utility.
- Secures the numerous permits required.

Maine Water Utilities Association

- Supported and assisted with passing needed legislation.

Customers of the Utility

- Provide financing by paying for new and increased usage services with the System Development Charge.

WHAT WAS THE DIVISION OF RESPONSIBILITIES? (Continued)

Public Utility Commission

- Approves and monitors System Development Charges.

HOW WAS THE PROJECT IMPLEMENTED?

The collection of the System Development Charge required the passing of a bill through Maine's State Legislature, known as "An Act to Fairly Apportion the Cost of New Water Utility Services". Efforts to pass this bill began in 1984 — the bill was finally passed in 1986 with the assistance of the Maine Water Utilities Association and a utilities lawyer, well-versed in writing legislation.

The Public Utility Commission was tasked by the legislation to support and accept the passage of this bill permitting collection of the System Development Charge.

The District began implementation by requesting payment of the System Development Charge before providing water service to new or increased usage customers. This arrangement continues today.

WHY WAS THE PROJECT SUCCESSFUL?

- Press coverage increased public awareness and support
- The system development charge was easily explainable

This developer financing drinking water supply project, with the support of the citizens and District of Kennebunk, has contributed greatly to alleviating the economic burden on existing customers and on the District itself. The project was very successful due to the following key factors:

1) The District Superintendent, Dave Sweet, remained in constant contact with the press. From the passing of the legislation to the implementation of the System Development Charge to the provision of water services, good press coverage increased public awareness and support.

2) The method derived for calculating the System Development Charge was meaningful to everyone involved. It was easy to explain, easy to understand, and a reasonable method.

LESSONS LEARNED

The best way to accomplish the tasks described in this effort is to go out as boldly as possible and try to get support from those with the most political influence and from the customers of the Utility.

CONTACT

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Information is available to the public upon request.

Panel Sessions

Alternative Financing Mechanisms: Dedicated Taxes and Fines

Moderator

Robert Moore
Assistant Commissioner
Connecticut Department of Environmental Protection

People have accepted more environmental programs in recent years and believe the level of environmental service should be increased. Despite this, the public has given little consideration to how the costs of operating these programs will be financed.

Many States are Turning to Taxes to Pay for Programs

One source of revenue that can be used to fund these programs is dedicated fines and taxes. Many states currently use this method of financing. In the State of Connecticut, a few examples of dedicated fines include taxes on oil, refining, and hazardous waste generators. The money generated from these taxes is pledged or directed to an Environmental Spill Fund. This money is used to repair the environmental damage caused by these industries. For example, this fund might be used to supply potable water after an oil spill or to fund a study that examines the effects pesticides have on drinking water supply. In each case, a direct link exists between the source of revenue and the application of funds.

Speaker

Gina Terry
Water Quality Program
Washington Department of Ecology

Washington State uses several alternative funding mechanisms to support environmental programs: taxes, fees, bond sales and citizen participation programs.

The current sources of Department funds amount to:

- 40 percent from general state appropriations,
- 20 percent from federal sources, and
- 40 percent from alternative funding sources.

Environmental Programs in Washington Supported by Alternative Financing

Every program in the Department receives some funding from alternative funding sources. At least two programs (Litter Control and Hazardous Waste Investigation and Clean-Up) are supported entirely by alternative financing methods.

A more traditional source of revenue is derived from 'sin' taxes. The Water Quality Grant program is funded using revenue derived from taxes on alcohol and tobacco products. The trend more recently has been to link the source of program funding with the beneficiary or the origin of the problem.

Fees for Surface Water Discharges

A good example of this occurred as a result of a citizen initiative to revise legislation that required a fee be charged for wastewater discharge permits. The 1988 legislation only authorized the Department to charge fees to cover administrative costs by up to $3.6 million per year.

Citizens were not content with this legislation and passed an initiative the following November that removed the $3.6 million ceiling and required the program to be self-supporting.

The initiative also changed the fee structure from a flat fee to a variable fee that increased as the toxicity of the discharge increased. Since the fee was tied to the composition of the discharge, it provided industry and Publicly Owned Treatment Works (POTWs) with an incentive to reduce the toxicity of their waste. The initiative also considered the unique needs of small municipalities by placing a cap on the amount that could be assessed on a residential unit.

Washington's Water Quality Account

Another source of revenue that is used to fund environmental programs is derived from the Water Quality Account. This account was established to clean up Puget Sound and other stressed waters in the State of Washington. The law establishing the Water Quality Account had bipartisan support and was opposed only by the Tobacco Institute. The law placed an 8 cent tax on each package of cigarettes, a 16.75 % tax on the wholesale price of all tobacco products, a sales tax on materials used to build waste water discharge facilities, and a guaranteed subsidy of $40 million from the general fund.

Washington State has been successful in implementing alternative financing methods. Among the reasons are:

- Cooperative Efforts

The Department of Ecology (DOE) does a great deal of political legwork when introducing new environmental programs and funding devices. The organization elicits assistance from environmental, economic, and public administration interest groups when drafting new legislation. Once the legislation is passed, the DOE continues to use these advisory groups in designing and implementing the regulations or program.

- Population Characteristics

Washington has a high per capita income and high level of education. Many who live there are transplants who chose Washington because of the environmental quality of life. Finally, the willingness of citizens to pay for maintaining this high environmental quality of life supports the state's efforts to finance its environmental programs.

- Public Education and Awareness

The Department has put a premium on programs that involve citizen participation and awareness. The Department aggressively seeks programs that ensure increasing environmental intelligence on the part of the citizens who will approve future funding decisions.

Lessons from the Washington Experience

Washington's experience provides several important lessons:

- **Dedicated taxes and fines are only revenue enhancers; the primary source of revenue is still derived from the general fund.**
- **Environmental agencies should bear some of the responsibility involved in securing funds for environmental programs.**
- **Dedicated fines are useful but officials must be careful to allow some flexibility for shifting the funds to tangential purposes and programs.**

Speaker

William Graham
Senior Finance Analyst
Government Finance Research Center

I will discuss taxes as one of several alternative financing mechanisms available to states to raise revenue, but first let me discuss briefly how we can assess the effectiveness and efficiency of taxing mechanisms we might choose to meet financing needs. Every government revenue source, whether used for on-going operations or capital projects, whether raised through debt or on a current basis, has eight criteria to measure its effectiveness and efficiency. No revenue source will meet all these measures fully, but the more measures addressed in a revenue source, the "better" it is.

Criteria to measure the effectiveness of revenue sources include:

- **Equity** reflects the fairness of the distribution of the funding burden among individuals. In environmental programs, equity can be approached from two directions: those who create the environmental problems should bear the funding burden (the 'polluter' pays) or those who benefit from the program should bear the funding burden (the 'beneficiary' pays).

- **Legislative acceptability** reflects the political attractiveness of a financing mechanism. There are unique legislative predispositions in each state that often influence the choice of a financing mechanism.

Criteria to Measure the Effectiveness of Revenue Sources

- **Public acceptability** reflects the willingness of those subject to a fee or tax to pay, or the willingness of the public to make a particular sector pay.

- **Feasibility** relates to the legal authority to impose a fee or tax as well as to factors that affect the workability of a financing mechanism.

- **Revenue potential** is measured by the amount of money that can be raised with a particular financing mechanism, and whether a mechanism provides a one-time or continuing source of revenue.

- **Flexibility** reflects the ability to use revenue from alternative financing mechanisms as needed for a variety of program activities.

- **Administrative requirements** relate to the effort needed to implement an alternative financing mechanism, including start-up costs and on-going collection and management funds.

- **Impacts** relate to whether a financing mechanism creates incentives for desirable behavior, and whether it places an undue financial burden on industry or general taxpayers.

Types of Taxes

A tax is generally a charge against sales, income, or property. Taxes are typically used when program funding needs are large and when the benefits of an activity are widespread. Unlike fees, there may be less of a direct relationship between the tax and the use of the funds. For state environmental programs, taxes on sales or income could be used. A sales tax could be levied on products that contribute to pollution, such as gasoline, pesticides, or other hazardous materials. An income tax could be imposed on those businesses whose industrial activities contribute to pollution. The link between revenue and their uses need not be, and often is not, direct.

Advantages of Taxes

Depending on the base, a tax can build directly on the principle that the polluter or beneficiary pays. For example, a tax on products that contribute to pollution problems (such as gasoline or pesticides) fall on 'polluters,' while a tax on protected resources (such as water) fall on 'beneficiaries' of water quality program activities. Another advantage of taxes is that a low rate of taxation can result in substantial revenue when the tax base is broad. A final advantage of taxes is that their imposition and collection may be relatively straightforward. This is because commodities on which a tax is levied generally have value and are tracked more closely than items with lesser value. Further, the mechanisms of existing state agencies may be used to collect revenues.

Disadvantages of Taxes

Legislatures may resist dedicating certain tax revenues to particular programs. Instead, they may reserve their taxing authority for general state programs. Also, in today's anti-tax climate public resistance to new taxes is high. For taxes not directly related to a particular program there may be competition from other programs or from the state's general fund for those revenues. The relationship between the tax base and target populations (polluters or beneficiaries) is tenuous, at best. Some taxes may be difficult to justify beyond the fact that they raise needed program funds. Given that taxes can be either progressive or regressive, the tax may place an undue burden on certain parties.

Sixteen states collect thirty-seven taxes related to environmental issues. Of the $492 million raised from these sources in 1988, 82 percent of the revenue was dedicated to funding state environmental programs. Examples of these taxes are listed below:

Sales Taxes	levied on products that contribute to pollution or on commodities that benefit from program activities.
Income Taxes	imposed on businesses who contribute to pollution or on businesses who benefit from pollution control.

Excise Taxes	levied on specific goods or types of transactions. Examples include hotel/motel room taxes, gasoline, alcohol and cigarettes. Excise taxes may also be levied on the privilege of conducting a certain type of business or transaction.
'Sin' Taxes	a type of excise tax, levied on commodities — cigarettes, tobacco, and alcohol. Virtually every state imposes some type of tax on these items. Taxes of these items are effective generators of revenue because demand for these commodities does not fall significantly when prices are increased.
Special levies	usually limited by either tax rate or total dollar amount and by the period over which the tax can be collected. For example, voters may give the county the authority to levy a $1.00 per $1,000 property tax for three years to raise funds for new water supply facilities.

Two examples of taxes that have been effective are listed below.

Examples of Environmental Taxes

Washington Litter Control Tax. The State of Washington assesses an annual tax on all businesses engaged in the manufacturing, wholesaling and retailing of products commonly associated with litter. The tax is levied on gross sales for wholesalers/retailers and on the value of products for manufacturers. The tax rate is .015 percent of gross receipts or value of the product. From 70 to 80 percent of the revenue generated by this tax is dedicated to litter control along Washington's roads and highways. The remaining 20 to 30 percent is dedicated to state recycling programs.

Oregon Tire Sales Tax. The State of Oregon assesses a $1 sales tax on each tire sold in the state. Collected at the retail level, the tax provides a net 80 cents per tire for state program administration, tire site clean-ups and reimbursement of users of recycled tires. The remaining 20 cents of the $1 that is assessed is consumed by program administration and operating costs.

Various Aspects of Types of Taxes

Type / Aspect	Sales Taxes	Income Taxes	Excise Taxes (including sin taxes)	Special Levies
Purpose	Discourage use of products that cause environmental harm or simply a source of revenue	Recover damage from industries that produce products that harm the environment	Discourage use of certain products or simply a source of revenue	Finance a particular project
Advantage	Small tax on a large base yields a significant amount of revenue	Small tax on a large base yields a significant amount of revenue	Imposition and collection are straightforward	Can be a useful source of temporary revenue
Disadvantage	Often not a direct link between the tax and the use of the funds	Could deter industries from locating in an area	Often not a direct link between the tax and the use of the funds	Usually require voter approval

Panel Sessions

Overcoming Barriers to Partnerships and Alternative Financing

Moderator

Dave Lenart
Project Manager
Tighe-Bond

The implementation of public-private partnerships and alternative financing methods are not without their challenges. This panel will examine some of the typical barriers that are encountered at the federal, state, and local levels. The panel will also discuss ways to address these barriers and strategies that can be used to permanently remove these barriers.

Speaker

Harvey Pippen
Director
Grants Administration Division
U.S. Environmental Protection Agency

Existing Sources of Federal Revenue may restrict Local Provision of Environmental Services

The federal government tries to promote public-private partnerships and alternative financing mechanisms by making available grants and loans to communities. However, these monies are not without their restrictions. The 'strings' that are attached to this revenue often act as a disincentive for municipalities or private sector firms to provide environmental services.

Federal, state, and local governments are also responsible for creating legislative and regulatory restrictions. The legislative restrictions can occur when a stringent tax or environmental code is enacted without considering the true cost of complying with the code. The regulatory impediments are operationalized as either environmental policy or grant procedure limitations.

EPA Seeks to Eliminate These Barriers

EPA realizes there are unintended effects that result from its grant policies and has taken the following steps to alleviate these barriers. The Agency has:

- **Formed a work group to identify the barriers;**
- **Composed case studies that document successful public-private partnerships; and**
- **Begun research to identify barriers that are attributable to the language used in legislation.**

Not only EPA, but all levels of government can adopt policies that will promote public-private partnerships and alternative financing mechanisms.

Where appropriate, EPA, OMB, and Congress could:

Steps to Overcome Barriers

- Issue formal policy statements and memos endorsing the use of public-private partnerships and alternative financing mechanisms;
- Promote pro-privatization conditions in the grant selection process;
- Assume a more flexible approach to public-private partnerships and alternative financing mechanisms that will allow for deviations on a case-by-case basis; and
- Examine how the existing regulations can be amended to produce an environment that is more conducive to establishing public-private partnerships and alternative financing mechanisms.

State and Local Approaches

Likewise, state and local governments may wish to consider policies that:

- **Provide grants for public-private partnerships and alternative financing projects,**
- **Form legislation to meet the needs of public-private partnerships and alternative financing, and**
- **Provide information to the public in the form of handbooks, tours of existing public-private facilities, and conferences.**

Speaker

Robert Varney
Commissioner
New Hampshire Department of Environmental Protection

New Hampshire's Sources of Environmental Revenues

Revenues for the Department of Environmental Protection are derived from two primary sources: 'sin' taxes and a real estate transfer tax. The State of New Hampshire has no sales or income tax. Traditionally, New Hampshire emphasizes local and regional approaches to solving problems. An example of this is the $3.00 surcharge that is levied on automobile registration. The money for this program is collected at the municipal level in order to minimize the role of the state.

Strategies that the Department of Environmental Protection (DEP) employs to overcome barriers include:

Strategies to Overcome Barriers

Communication. DEP officials meet regularly with the Governor and members of the legislature to keep them abreast of the Department's activities and concerns. It also gives the DEP a chance to informally 'test' the feasibility of new ideas. Not only is it important to communicate with government officials, it is also important to keep the general public well informed. For this reason, the DEP regularly releases press releases and periodically sponsors conferences that address environmental issues.

Internal Management. Every organization has room for improving its operations. By applying time management and project management techniques, the performance of most organizations can be improved without increasing the level of funding. Essentially, efficiency gains can be realized if managers examine new ways to deploy their resources. Efficiency gains can be documented and will serve as powerful ammunition when trying to secure additional funding. The legislature is more likely to fund an agency that it believes will productively use the resources.

Alternatives/Options. It is advised that the agency thoroughly evaluate more than one option in detail and be ready to suggest alternatives if their original plan is rejected. An example where a back-up plan proved invaluable was when the DEP recommended a fee that was a fixed, flat rate. The legislature was opposed to this because they questioned the equity of this type of assessment. They were ready to support a variable fee, and the DEP had already prepared a detailed analysis of a variable fee and was able to present this option to the legislature.

Lessons from the New Hampshire Experience

There are several lessons from the New Hampshire experience for others to consider:

- **Take caution not to dedicate too large a portion of the dedicated fee fund for one purpose or program;**
- **Citizens should be able to redirect their tax dollars as priorities change; and**
- **The revenue derived from fees should not only be applied to fund new programs and personnel costs but should be used to assume a growing portion of the existing operating budget.**

Michael Meotti
Senator
Connecticut State Senate

Barriers to Implementing Alternative Financing

Many barriers are encountered when trying to implement public-private partnerships and alternative financing methods. From a legislative perspective, here are a list of some of these barriers:

- Current public opinion opposes the imposition of new taxes and locks elected officials into a position where they will not support additional taxes;

- Some government managers and elected officials oppose dedicated funds on the grounds that dedicated funds lead to a lot of off-budget maneuvering and a subsequent distortion of funding efforts and priorities;

- Government agencies may refuse to suggest or support fines for activities they already conduct, such as permitting, because this places an additional administrative burden on the agency; and

- The lack of awareness of general tax subsidies for certain products and services such as solid waste disposal and drinking water leads many people to believe that they are paying the true market cost for the good or service.

Operational Difficulties

There can be operational difficulties associated with the collection of the tax, fine, or penalty. It is not always clear what state agency should collect the money and where the revenues should go. Likewise, officials must establish a clear scale of fines to address whether those subject to paying a fine will pay a constant amount or a graduated rate, depending on the severity of the incident for which it is being fined. There are implications for this. For instance, the imposition of a quantity-based tax on pollutants would create major incentives to underreport discharges. If the discharge data that is collected in these reports has future value, the integrity of this data could be compromised by underreporting.

From our experiences in Connecticut, there are several strategies to consider when trying to overcome operational barriers:

Lessons Learned from the Connecticut Experience

- Use transactional fees to support dedicated funds and have a logical mechanism of collection;
- Communicate or signal the true market price of a good with targeted taxes;
- Develop support for public-private partnerships and alternative financing methods with top-level initiatives from the governor and tax committee chairperson; and
- Focus/mobilize grassroots political pressure to support the implementation of public-private partnerships and alternative financing methods.

Panel Public-Private Partnerships: Merchant Facilities and Developer Financing

Moderator **Steve Allbee**
Director
Office of Municipal Pollution Control
U.S. Environmental Protection Agency

This session will consist of two segments. First, we will have a case study that highlights the use of a merchant facility to provide a wastewater pipeline. The second case study shows how developer financing can be used to expand a drinking water supply plant. In each case study we hope to provide the following information: how the partnership was implemented, why the private partner was chosen, what the financing and procurement arrangements were, and what advantages and disadvantages were associated with the partnership.

Case Studies:

Rutland, VT
Wastewater
MERCHANT FACILITY

Frank Heald
President
Pico Ski Resort

Mark Youngstrom
Engineer
Wright Engineering, Ltd.

Manchester, NH
Drinking Water Supply
DEVELOPER FINANCING

David Kittredge
Director
Manchester Water Works

WASTEWATER

Merchant Facility

SEWER PIPELINE
RUTLAND, VERMONT

- **Private citizens from four communities worked together to build a sewer pipeline through the formation of the Alpine Pipeline Company. Wright Engineering, Ltd. served as the planning, design, and construction consultant for this project.**
- **The facility was financed both by private user shares and industrial development bonds issued by six local banks.**
- **The private partner accepts responsibility for performance and guarantees compliance with environmental permit requirements.**

SUMMARY

The area along the Route 4 corridor, between Rutland and the top of Sherburne Pass, had been experiencing sewage disposal problems for twenty years. Attempts were made to secure federal and state funding to alleviate this problem, but these attempts were to no avail. Finally, the decision was made by several key landowners that a sewer had to be built even if federal and state dollars were not available. The construction of the pipeline required that the towns located along the corridor forfeit some or all of their ultimate oxygen demand (UOD) capacity to the Alpine Pipeline Company. This sewer project has done much to alleviate the potential health hazards and resulting economic burdens experienced by businesses and residences located along the corridor. Prior to the pipeline's construction, businesses used septic systems and were forced to pump them regularly. Another undesirable condition that the pipeline alleviated was stunted commercial and residential growth along the corridor.

PARTIES INVOLVED AND TIMEFRAME

Public Partners	City of Rutland, Town of Rutland, Town of Sherburne, and Town of Mendon
Private Partner	Alpine Pipeline Company
Population (Rutland Area)	18,000
Form of Government	Board of Aldermen
Project Initiated	December 1983
Project Completed	December 1984
Total Capital Cost	$2.5 million

WHY WAS A PRIVATE PARTNER CHOSEN/OTHER ALTERNATIVES

- Urban Development Action Grant (UDAG) Funding was not available to fund this project
- Business officials joined local communities to pursue a solution to the sewerage problem

One alternative that was considered for building a pipeline was to establish a fire district. However, this option was quickly rejected because of the legal responsibilities and obligations that the residents of the fire district are required to assume. Not everyone located along the corridor was willing to be held legally and financially accountable for the success of the project.

The next option that was considered was to establish a legal entity that would be able to obtain Urban Development Action Grant (UDAG) monies through the City of Rutland. This option was not feasible since UDAG funding is traditionally only available for interceptor sewers and the EPA classified this project as a collection sewer. These sewers are not eligible for EPA funding. Another factor contributing to the lack of federal dollars to defray the costs of this project was the small size of the customer base.

Without this assistance, one of the few remaining alternatives to building this pipeline was to establish a for-profit corporation to provide this environmental service. Several key landowners located along the corridor incorporated themselves and formed the Alpine Pipeline Company to build the pipeline.

WHAT WERE THE FINANCING ARRANGEMENTS?

- Both user shares and industrial development bonds were used to finance the project

Capital Costs

This project was financed totally through private funds. In the fall of 1983, the Alpine Pipeline Company was formed and financing arrangements were reached with six local banks. The banks required Alpine Pipeline Company to pre-sell $1,000,000 in user shares prior to the banks financing the bonds for the remainder of the project. The participating banks issued $1,650,000 in industrial revenue bonds that were equally held by six banks. Thus, each bank issued $275,000 worth of bonds. Beneficiaries of the pipeline were also the investors. That is, residents and businesses located along the corridor were also purchasers of user shares. The company maintains a substantial cash balance and this year may be able to pay off the bonds in their entirety only five years after the construction of the pipeline.

Operational Costs

Operations and maintenance cost will be covered by annual usage fees that will be levied against both residential and commercial users. The monies generated from the collection of annual usage fees will also be used to cover debt service expenses.

WHAT WERE THE PROCUREMENT ARRANGEMENTS?

- Public notice was given regarding contractor selection. Two separate contracts were awarded to Cooley Construction Company

In a competitively negotiated procurement process, the Alpine Pipeline Company , with the assistance of Wright Engineering, issued a Request for Proposals (RFP) for two separate phases of the project. The first phase of the project was the construction of collection sewers and the second phase was for the construction of two pumping stations with a forced main. Alpine Pipeline pre-qualified several contractors and after reviewing the proposals, selected Cooley Construction Company for both phases of the project. Cooley Construction produced the lowest bids for both phases of the project and this was a contributing factor to their selection.

WHAT WAS THE DIVISION OF RESPONSIBILITIES?

Alpine Pipeline Company

- Own, operate, and maintain the sewer system
- Collect user fees directly from customers
- Comply with environmental and building permit requirements
- Obtained financing for the project

Wright Engineering Ltd.

- Designed the plans for installation of the pipeline
- Secured the environmental and building permits

Cooley Construction Company

- Constructed collection sewer
- Constructed two pumping stations with a forced main

HOW WAS THE PROJECT IMPLEMENTED?

- Local residents provided the impetus to construct the sewer pipeline
- Cooperation among the towns located along the corridor was secured
- Legislation that would allow the construction of the pipeline was enacted

A local group of residents and business owners who were directly affected by the sewerage problems along the corridor worked together to explore options for constructing a pipeline. They considered forming a fire district, securing federal grant monies, and forming a corporation. The latter option was ultimately implemented and resulted in the formation of the Alpine Pipeline Company.

The financial attractiveness of building the pipeline hinged on getting all of the towns located along the corridor to surrender a major portion of their water capacity to the Alpine Pipeline Company. At a public hearing, each of the towns was assigned an Ultimate Oxygen Demand (UOD) limit. This numerical limit was based on a scientific review of the receiving waters and the water treatment method employed at the City of Rutland's water treatment facility. Operationally, the UOD determines the capacity allotted to the town which is measured in millions of gallons per day (mgd). Alpine Pipeline Company had to convince each of the towns that assigning them part or all of their UOD was both financially and environmentally attractive.

Once the corporation was formed, construction of the pipeline was not able to proceed. Before the pipeline could be constructed, state legislation had to be ratified that allowed a privately constructed sewer of this magnitude to be built in a state highway right-of-way. Local government and business officials worked with state representatives and the Vermont Department of Transportation to support legislation that would allow private construction to take place on public lands. Once the legal barriers that blocked this project's implementation were eliminated, construction of the 11-mile sewer pipeline was able to begin.

WHY WAS THE PROJECT SUCCESSFUL?

- Cooperation between public and private partners
- Local control of the project avoided the overhead costs associated with government grants and out-of-state bonds
- Expedient invoice payments induced the contractor to complete the project on time and under budget

Many factors contributed to the success of this project. One of the most important factors was the cooperation between public and private partners throughout the project. These groups worked closely together and were willing to forfeit some or all of their ultimate oxygen demand (UOD) limits to Alpine Pipeline in order that the pipeline could be built.

Another factor contributing to this project's success was that it was handled locally. Wright Engineering estimated that the total project cost was 25% less because the overhead costs associated with government grants and out-of-state bonds were avoided. The cooperative spirit was also encourage by Alpine Pipeline's commitment to pay invoices within five days instead of the traditional 30 day period. This quick turn around provided an incentive for the contractor to complete the project on time and under budget.

LESSONS LEARNED

- A confident and enthusiastic group of private citizens can successfully tackle environmental projects

Private citizens do not need to totally rely on the government for the provision of environmental services. However, this project's success still depended on getting cooperation from both the state and local governments. The initiative demonstrated by local residents who identified the problem and worked to find a solution was a contributing factor to the success of the project.

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DRINKING WATER SUPPLY

Developer Financing

MANCHESTER WATER WORKS' SOURCE DEVELOPMENT CHARGE

MANCHESTER, NEW HAMPSHIRE

Manchester, New Hampshire

- The Manchester Water Works established a developer financing arrangement that supports increased water services requirements.
- Financing for this venture is obtained on a continuing basis by the collection of an impact fee from new customers in Manchester and the surrounding area.
- This arrangement has contributed greatly to alleviating the economic burden on existing customers and on the water works utility itself.

SUMMARY

Manchester Water Works is a municipal water works servicing approximately 24,000 customers within the City of Manchester and approximately 3,000 customers in five surrounding towns; it also provides wholesale water to a sixth town, two municipal water precincts, and to an investor-owned water company. Manchester Water Works functions under New Hampshire law as a public utility and is regulated by the New Hampshire Public Utilities Commission. The population of the Manchester area has increased dramatically since 1980, thereby requiring that Manchester Water Works increase its public utility franchise area to meet the increased demand for water.

New customers and local citizens and developers finance their own water needs by paying an impact fee. The impact fee has two components: 1) A Capital Cost Charge which requires new customers either to pay at the outset for all costs to upgrade the water works, or to enter into a contract that provides for new customers to recover some of their costs when additional, new development occurs; and, 2) A Source Development Charge where new customers outside the franchise limits pledge funds to be used for future expansion of services. In April 1987, Manchester Water Works received the Public Utilities Commission's approval for the impact fee, and instituted the charging in May 1987.

PARTIES INVOLVED AND TIMEFRAME

Public Partner	Manchester Water Works
Private Partner	New water supply customers
Population (Manchester)	105,000
Median Household Income	$15,608 (from 1980 census)
Form of Government	Mayor and Board of Aldermen
Project Initiated	May 1987
Project Completed	On-going
Total Capital Cost	$13.1 million (for 1992) Projected engineering and construction costs

WHY WAS A PRIVATE PARTNER CHOSEN/OTHER ALTERNATIVES

The first alternative considered, but rejected, was for the Manchester Water Works to borrow funds, improve the utility, and then pass along the costs to the customer with increased rates or a surcharge.

The Manchester Water Works decided that the collection of the Capital Cost Charge and the Source Development Charge was a more reasonable and equitable approach, charging only the new usage customer for the new services.

WHAT WERE THE FINANCING ARRANGEMENTS?

The City of Manchester collects an impact fee consisting of a Capital Cost Charge and a Source Development Charge. The Capital Cost Charge is the fee collected from property owners and developers who require water system extensions. New customers pay all costs of extending water services to them upfront; or, alternatively they enter into a contract whereby they can recover some of the costs when additional, new development occurs. The Source Development Charge is the fee collected from new customers outside the franchise limits, in exchange for water supply services. These funds can only be used for future expansion of services. The charges are not a system buy-in, but instead constitute a customer's capital contribution to a proportionate share of this water supply project. These charges are based on the product of estimated usage (based on meter size) in gallons per day and estimated cost per gallon per day of the project.

Water works expansion and the operations to support these new users will be fully and exclusively funded through the Capital Cost Charge and the Source Development Charge. It will take into consideration that the cost of the project included interest payments on funds that Manchester Water Works borrowed under the City's general obligation bonding.

Manchester Water Works is required by the New Hampshire Public Utilities Commission to file an annual report of costs, revenues, and construction timing for the purpose of annual recalculation of the Capital Cost Charge and Source Development Charge.

WHAT WAS THE DIVISION OF RESPONSIBILITIES?

Manchester Water Works

- Decided to build; obtains approvals for financing and studies; and designs, owns, inspects, operates and maintains the water utility

New Hampshire Public Utilities Commission

- Approved the Source Development Charge; required filing of a franchise expansion plan; and reviews the Manchester Water Works annual report for re-approval of the charge

Customers of the Utility

- Provide financing by paying for new water services with the Source Development Charge

Board of Water Commissioners of Manchester Water Works

- Reviews and advises on community issues

HOW WAS THE PROJECT IMPLEMENTED?

The collection of the Capital Cost Charge and the Source Development Charge required obtaining approval of the project from the New Hampshire Public Utilities Commission. Additionally, the Commission required Manchester Water Works to file a franchise expansion plan. The approval occurred in April 1987. The charge was then implemented in May 1987.

In general, Manchester Water Works determines how best to provide water supply services to its customers, including the appropriate design, operation, and maintenance for all services. The private customer provides the financing (through payment of impact fees) and also arranges for the construction required for new services. Construction efforts are approved and continually inspected by the Manchester Water Works.

Currently, Manchester Water Works is working with a down-stream hydro-electric plant (the Public Service Company of New Hampshire) to resolve issues concerning the diversion of water from the Merrimack River. If Manchester Water Works' activities significantly affect the hydro-electric plant, they may be required to obtain a license from the Federal Energy Regulatory Commission (FERC).

At this time, no special legislation has been enacted.

WHY WAS THE PROJECT SUCCESSFUL?

The project has been very successful because the Manchester Water Works decided that the collection of the Capital Cost Charge and the Source Development Charge was a more reasonable and equitable approach; thereby, only charging the new customer for the new services and causing no direct impact on rates to existing customers.

LESSONS LEARNED

More time and money should be spent on the front end activities, in this case the initial research and background work. For this project, the initial revenue projection from population growth was off the mark. The economic downtrend that Manchester is experiencing is also causing a funding deficiency for the project. This error in projection will most likely cause the original plans for this project to change dramatically.

CONTACT

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Information is available to the public upon request.

Panel Session

Alternative Financing Mechanisms: Management Funds

Moderator

Tex LaRosa
Chief of Operations
Department of Environmental Conservation
Vermont

This session will focus on alternative financing experiences from Kansas and Rhode Island as well as a brief discussion about some of the financing options open to state managers and the advantages and disadvantages associated with them. By way of introduction, Vermont's circumstances are worthy of mention. Historically, Vermont has funded wastewater treatment, water supply, and solid waste programs. It has more recently developed an underground storage tank initiative, and a mini-Superfund for hazardous waste clean-up. To fund these programs, the Department obtains dedicated receipts from tank fees, tipping fees, and a gas tax. The largest contribution of funds comes from an annual capital appropriation.

Vermont's Third Century Fund

When the state assessed its infrastructure needs for the next ten years, it determined that it would need $500 million to fund improvements for a population base of only 550,000. Vermont realized it could not fund this level of program by traditional means. At the behest of the Governor, state officials have begun exploring the idea of a Third Century Fund. The Fund would serve as a special account or trust fund, supported by dedicating existing revenues to it and finding new sources to augment them.

Short term needs from 1992 to 1994 will be particularly great, so officials hope to be able to leverage the funds to sell public bonds. The concept is still in the planning stages. Vermont hopes to have legislation authorizing the Fund by early 1990.

Speaker

William Bryson
Intergovernmental Coordinator
Kansas Corporation Commission

Many here have tried innovative ways to raise money to fund environmental programs. Kansas has relied on general revenues and some periodic attempts at innovative funding reform. These innovations have not often worked; the legislature has changed the funding level and allocation on many after their initial designation.

Despite new and increasing demands for greater environmental protection, there is no real way to estimate ahead of time what any of

Priorities Need to be Established First

these programs will cost, since a complete understanding of the requirements will require an inventory of the sources of pollution. In the area of water quality, Kansas assumed that the State needed to establish a list of priorities for the next five to ten years. Kansas Water Authority and the River Basin Advisory Committee identified watershed protection (including surface and ground waters), nonpoint source pollution, and clean-up of major sources of contamination to water resources as its highest priority. How to fund these initiatives became the next issue for resolution.

For many years, Kansas' Health and Environment Department subsisted primarily on general fund money and an assortment of permit fees for various primacy activities, including the National Pollutant Discharge Elimination System (NPDES) program, the Public Water Supply System (PWSS) program, waste management, and landfill uses.

By comparison, the Kansas Corporation Commission regulates environmental activities related to oil and gas. About 70% of the Corporation's $4 million annual budget comes from assessments on oil and gas. These are assessments on per barrel or per million cubic feet. Kansas also passed a severance tax in 1985 on oil and gas which is based on the dollar value of the asset. Depressed oil prices have severely reduced revenues from these sources.

Environmental Programs in Kansas Supported by Alternative Financing

In 1988, the water agencies in Kansas assembled a package of dedicated funds to support water activities, knowing that fewer Federal dollars would be available. The legislature has approved dedicated and general funding at around $16 million for a number of water related activities.

The sources of dedicated revenues that comprise the Water Protection Fees include:

- 3 cents per 1,000 gallons of water (gw) sold at retail by public water supply systems;
- 3 cents per 1,000 (gw) appropriated for industrial use;
- 3 cents per 1,000 (gw) for stock watering for commercial feeding operations;
- Pesticide Fee of $100 for each agricultural chemical registered; and
- Fertilizer Inspection Fee of $1.40/ton inspected.

Additional Funding For Water Programs

Additional funding will come from:

- Fines and penalty receipts (roughly $100,000 per year);
- Proceeds from the Kansas Economic Development Initiative Fund ($2 million); and
- $6 million infusion from state general funds.

Lessons from the Kansas Experience

Lessons from the Kansas experience suggest that officials should:

- **Develop detailed and accurate workload models to assess program resource needs and project the return from the innovative sources of funding that are proposed;**
- **Involve the legislature from the early stages to incorporate their adviceand support in the funding proposals;**
- **Include financing details in the legislation to avoid drawn out debate at the implementation stages; and**
- **Try these approaches on a small scale to ensure their workability.**

Speaker

Edward Syzmanski
Chief
Water Division
Department of Environmental Management
Rhode Island

Historically, Rhode Island's Federal Construction Grants funding has been insufficient to pay for the eligible costs of upgrading secondary wastewater treatment facilities. The state has provided some state grants to those communities which did not receive full project funding with a federal grant. However, those funding attempts were only for the highest eligible projects, namely secondary wastewater treatment facilities.

Lessons from the Rhode Island Experience

Because many other needs remained unfunded, Rhode Island was forced to find another method of providing for necessary environmental projects besides treatment facilities.

In 1988 the State General Assembly created the Rhode Island Aqua Fund. This fund was established to be a multiple-purpose, comprehensive approach to focus state resources on the environmental problems associated with cleaning up the Narraganset Bay. It was also to be available for projects which would prevent future pollution of the Bay. The fund would approach this clean water goal through programs such as: industrial pretreatment, sediment and sludge abatement, non-point sources pollution reduction, wastewater treatment facility upgrading, and stormwater management.

The Aqua Fund has an Advisory Council consisting of 21 members. The General Assembly obviously intended for the program to be open to all environmental concerns. Its membership includes 13 appointed positions and 8 ex officio members.

The appointed individuals must meet requirements set forth in the legislation. The initial council members serve terms of from 1 -3 years, and replacements are appointed for full 3-year terms. All council members are non-compensated.

The Aqua Fund consists of $15 million to be obtained from the issuance of general obligation bonds and notes. The Director of the Department of Environmental Management (DEM) is authorized to approve funding for projects. He does so with the advice of the Advisory Council.

Use of the Aqua Fund

The $15,000,000 fund is divided into five specific categories:

- **Planning and Program Implementation ($250,00) grants for preparation of statewide programs and pollution projects;**
- **Pilot and Prototypical projects ($750,000) grants for new, innovative projects sponsored by communities or non-governmental entities;**
- **Wastewater Treatment ($7,000,000) loans to private entities for WWTF grants and to municipal WWTF projects;**
- **Pretreatment Facilities and Equipment ($4,000,000) loans to municipalities and private entities. It can also be used for administration, monitoring and enforcement work; and**
- **Urban Runoff Abatement ($3,000,000, 50 percent loans and 50 percent grants) to municipalities for prevention programs and administration.**

The Advisory Council is authorized to spend up to $50,000 each fiscal year for professional services and support staff. Also the DEM may set aside 4% of each of the five categories for its administrative expenses.

The Council has received many requests for funding. However, they have not yet issued approval for any projects. An environmental planner started working for the Council recently and is now preparing rules and regulations. Once these are adopted, the Council will be able to review the projects and begin to award the grant funds. The rules and regulations should be in place in early 1990.

Speaker **Ann Carey**
Vice President
Apogee Environmental Research, Inc.

Once a state has gone to the trouble of securing revenues for a particular program, it is equally important to manage these funds effectively. The most important reason program managers seek to establish some sort of financial management mechanism is to ensure that revenues from a particular source are used for their intended purpose. Additionally, they provide continued funding for multiyear projects, guarantee repayment of bonds for capital investments, and capture interest earnings on fund balances, where allowed.

Four management fund options are commonly available.

Types of Management Funds

A Special Account is set up within a general fund, but its revenues can be used only for specified purposes. The main advantage is that it is easy to do and may not require legislation. The disadvantage is that it is possible that funds could be diverted by the state for other purposes.

A Trust Fund is similar to a special account and may be set up within or outside of a general fund. Its advantage is that it is potentially more secure and may earn interest. The disadvantage is that it may require constitutional or legislative authority to establish. Trust Funds are beginning to be viewed by budget officials and legislators as a way to circumvent the formal appropriations process.

Enterprise Funds support services that are self-supported through user fees. These services include water and sewerage, electric and gas utilities, airports, and transit activities. The main advantage is the fund's clear linkage between fees and services. The disadvantage — if not structured properly, or for a service where the resource is undervalued (such as water), the activity may not be self-sufficient. Some enterprise funds need to operate with a periodic infusion of capital.

Revolving Loan Funds provide loans for capital investments. Repayments to the fund provides resources for additional loans; hence, its revolving nature. The advantage of revolving loan funds is the leveraging of initial resources used to establish the fund. The disadvantage is the significant amount of start-up capital needed, a difficult task in this time of diminishing resources.

Several examples illustrate how some of these management options have been used in conjunction with a dedicated funding source.

Examples of Management Funds

Dare County, North Carolina, assesses a 3% occupancy tax on hotels that goes to a special account to pay for infrastructure investments, including a wastewater treatment plant, a water supply plant, a new school, and a new jail. Corpus Christi, Texas, levies impact fees on new developments that go to four trust funds to pay for water and sewer infrastructure.

In Riverside County, California, a 25 cent surcharge on the local solid waste tipping fee goes to an enterprise fund to pay for closure and replacement of landfills. These revenues are insufficient to pay all the costs, and are supplemented from other funding sources.

Washington's "Centennial Clean Water Fund" is funded by a combination of tobacco and sales taxes that generates up to $40 million a year. These funds are deposited to a "Water Quality Account" maintained as a revolving fund by the State treasury. The Department of Ecology makes loans (and some grants) from this fund for local water quality initiatives.

Nantucket, Massachusetts, employs a 2% real estate transfer tax whose proceeds go into a "Land Bank," which acquires shoreline property for public access & recreation.

Puget Sound, WA

Finally, Puget Sound, Washington, has proposed creation of a "regional utility" that would provide water quality services across multiple jurisdictions bordering the Sound, financed through a household or business fee of from $4.80 to $12.50 per residential, commercial, or business unit per year.

Various Aspects of Fund Types

Type / Aspect	Special Accounts	Trust Fund	Enterprise Fund	Revolving Loan Funds
Purpose	Ensure that revenues from a particular source are used for a particular purpose	Ensure that revenues from a particular source are used for a particular purpose	Support services that are self-supported through user fees	Provide loans for capital investments
Advantage	Easy to establish and probably won't require legislation	More secure than a special account and can earn interest	Clear linkage between fees and services	Initial resources can be leveraged to establish the fund
Disadvantage	May have funds diverted to other accounts	May require legislation	May not be truly self-sufficient	Requires a significant amount of start-up capital

Panel Making It Happen

Moderator

Dave Fierra
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Region I

Introduction

This panel will discuss how to secure the necessary resources needed to fund environmental programs and examine strategies that will encourage private participation in the provision of these environmental services. Not only is it important to secure more resources; it is equally important to effectively apply the existing resources to our environmental goals.

Speaker

Elizabeth Miner
Chief
Regulatory and Program Analysis, Water Policy Office
U.S. Environmental Protection Agency

Before we discuss how to implement alternative financing mechanisms for water programs, we must realize an essential fact. The drinking and wastewater services in this country are relatively inexpensive because we have chosen to publicly subsidize them.

The Public is Willing to Pay for Clean Water

Poll after poll has documented the public's willingness to pay for increased levels of environmental protection. We must link this willingness to pay more with the reality of doing so. And we must, when we pass new legislation or contemplate a new environmental program, assess its true cost, and how we are going to meet that cost.

There are number of things that are responsible for transforming an idea for an alternative financing method into reality. The need to involve all sectors affected by the environmental programs and their financing methods is crucial. This involvement should begin when the legislation is being drafted or the programs designed, and should continue through the implementation stage.

Programs Need to Set Priorities and Be Creative

The need to set priorities for environmental activities is a must. The public should be involved in this process to ensure that its money is directed to combatting environmental problems of greatest concern. State Clean Water Strategies are a good way to do this for water programs.

Governments need to be creative and realize that there is no single solution to the funding shortfall. Rather a mix of revenues derived from fees, fines, and taxes is optimum to ensure a stable, continuous funding base. Aggregating revenues into specially managed accounts or funds which grow over time is also a growing and highly successful tool.

Creative Approaches For: Fees

The Office of Water State Funding Study made a number of findings with regard to specific mechanisms. With regard to fees, do not spend a large amount of resources to collect small amounts of money. It is often best to incorporate the fee structure in legislation and include a clause allowing the agency to alter the actual fee rate if necessary. When designing the fee system, determine the full cost of the water quality program the revenue from fees must support. This cost should include the base elements of the program such as monitoring and enforcement. Where possible, add the collection of the fee to an already existing collection process so as to minimize administrative costs. Convince the regulated community that they will receive better services if the program is adequately funded. A user fee on drinking water can be effective at yielding high revenues with low impacts.

Fines

Fines are a useful supplementary source of revenue and should not be viewed as a stable revenue stream for base programs. In the unfortunate case of an extreme environmental accident, a large fine can provide the basis of a fund that can generate future revenue. If fines are dedicated back to the water quality program, place the revenues in a separate account so they are not directly funding the portion of the program that collects them. This avoids the appearance of conflict of interest.

Taxes

Taxes are often based on the beneficiary pays principle. Other forms of taxes are product taxes. Taxes can be levied on products that contribute to water pollution, such as pesticides. Even a small tax can generate a large amount of revenue if the tax base is large.

Need for Balanced Funding for State and Federal Sources

There is a trend to increase the number of dedicated funds that are used to fund environmental programs. Despite the fact that dedicated funds are a desirable funding mechanism, and where used, have generated large amounts of money, they can have their disadvantages. These disadvantages include the potential for raiding from other programs if the Fund income grows substantially and the tendency to rely too heavily on these funds as a substitute, rather than a supplement, for funding.

We must also not forget that most of these programs are directed at raising revenues from point sources of pollution, yet non-point sources constitute some 65 per cent of our current pollution problem. We should consider how to raise revenues from nonpoint sources; for example, products that pollute, or fees on transfers of land slated for development.

As direct federal funding diminishes, Congress is also looking at new ways to institute alternative financing. Senators Lautenberg, Chafee, Bradley, Mitchell, and Baucus and Representatives Studds and Nowak have all introduced or are considering bills that include innovative ways of financing water programs.

Finally we must not forget that it is not just new money that we need — it's also efficiencies, institutional changes and technical assistance to reduce the need for the money in the first place.

Speaker

Len Bechtel
Outreach Specialist
U.S. EPA
Resource Management Division

Based on comments that have been made in our sessions the past two days, two issues need to be addressed. First, the advantages of public-private partnerships will be further discussed. Then, some actions you may take to facilitate partnerships in your communities will be presented.

The Importance of Partnerships Stems from Their Ability to Improve Services

Some people have mentioned that they believe the main advantage to public-private partnerships is to reduce the level of resources needed to perform an environmental service. This assessment may not be accurate. In fact, a municipality should not enter into a partnership agreement solely to save money. It should, however, build partnerships with the private sector if it wants to improve, expand, or enhance environmental services in the most cost efficient manner.

Each type of partnership offers something different to both the public and private partners. Municipalities need to establish their goals and incorporate them into the contract. The written agreement between the local government and the private sector must clearly delineate mandatory performance levels and risks.

What State and Local Governments Can Do

Several activities you should perform prior to entering into an agreement to get you over the 'hump' are:

Homework. Although the information provided at this conference has been quite helpful, you need to prepare in greater detail before engaging the private sector. Localities should thoroughly research companies, past partnerships and other financing options to assess what approach is best for them.

Understanding the Need for Assistance. The fact is, you can't do it alone. Go to the state or to EPA when you run into trouble. Help is available. In addition, always have experienced legal counsel when negotiating the contract, even if you have to go out-of-house to get it.

Mutual respect. Each party has different interests. The public sector wants to provide top quality environmental services at a reasonable cost, while the private sector needs to make a profit in the long run to survive. Both parties must try to reach a mutually satisfying agreement, which is only accomplished if each party respects the other's interests.

Public Support. No government activity can be successful without public support. This is especially true with environmental services due to their high visibility. An educated public is usually a supportive public when a partnership is being pursued for the proper reasons. Efforts to disseminate information to citizens must begin very early in the decision making process.

Public-private partnerships might not work in all cases, but they have been effective in many situations. They give municipalities another card to look at when considering financing options. Occasionally it will be the trump card in a game we cannot afford to lose — that of defending our natural resources.

Speaker **Arlene O'Donnell**
Assistant Commissioner
Massachusetts Department of Environmental Protection

The previous panels of the conference focused on how to design and operate public-private partnerships and alternative financing mechanisms. I want to focus my presentation in a broader policy context; how to more effectively spend the money that comes in and how to promote environmental programs by emphasizing their long-term economic benefits. Three examples of what Massachusetts is doing to better link environmental programs with economics include:

Building Support for Public Programs. The regulated community and the taxpayers are willing to pay more money if they can see tangible signs of improved service. We are also involving the public in setting the program's priorities. Currently the DEP is ranking water bodies in terms of their water quality. The DEP also plans to conduct systematic reviews of its programs and will communicate the results of these reviews to the public via press releases and publications.

Focus on Pollution Prevention as a Cost-Effective Approach. A model case of pollution prevention was done by Gillette. This company employed new technology that reduced the amount of water needed in its manufacturing process by 90 percent and will save the company millions of dollars. It is often difficult to convince people that an initial up-front investment will yield long-term economic benefits.

Directing State Investments in an Environmentally Responsible Way. The agencies that administer environmental programs need to encourage input from the regulated community in order to ensure that their programs are implemented in a way that is responsive to needs of industry as well as the environment. The agencies need to stress innovation and flexibility and recognize that although standards should be applied across the board, unique case-by-case evaluations may be necessary, especially for small businesses or communities.

If these steps are not taken by environmental agencies, these organizations run the risk of public backlash. If the agencies do not educate and establish communication with the public, they are likely to have to fight unnecessary funding battles. The time used in fighting such battles could be better spent administering environmental programs.

Speaker

Armando Carbonell
Executive Director
Cape Cod Planning

Given the current budget constraints that agencies are facing nationwide, there is a need to utilize new thinking and examine non-traditional ideas that might seem 'a bit crazy' at first.

Thinking Creatively can Provide Solutions to Financing Problems

A traditional problem with funding environmental programs is that the accounting systems that are used to record program costs do not reflect the true and long-term costs of programs. They underestimate the long-term implications of underfunding environmental programs.

Another policy that I find particularly distressing is that in times of budget cuts, the first people who are fired are from management. It is precisely in tough times that we need the skills of management to redirect limited resources to accomplish program objectives.

Recovering Administrative Costs

Even when people are paying some fee, fine, penalty or tax, they are often not paying both the full costs of the environmental damage and the program administration costs. I would argue that it is critical to recover these administrative costs and that they should be assessed on a proportional basis. Remember that clerical costs are not the only component of administrative costs; the costs of lab tests, engineer's salaries and insurance for personnel should also be recovered.

Impact fees can be used to collect the costs of providing an environmental service. Other sources of funding can be derived from 'involuntary' sources. Involuntary sources could also be labeled as negotiation. For example, if a real estate developer is applying for a permit to build along the coast, the issuing agency could require that the developer build a road or provide for independent refuse collection for the area.

Government Entrepreneurship

A last source of funds to meet our environmental challenges can result from what I call 'government entrepreneurship.' Governments need to think more like private industry and develop programs that generate revenues that are self-sustaining. This idea of government entrepreneurship can and does work in the provision of environmental services. Cape Cod Planning's acquisition of Geographic Information Systems (GIS) technology, and its subsequent marketing of GIS services to state and local governments, has introduced valuable expertise to our problem solving efforts that were not otherwise open through normal government funding channels. Other opportunities await us, if we initiate them.

Region 1 Closing

Speaker

Paul Keough
Deputy Administrator
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Region 1

The Action Agenda that Follows Identifies Roles for EPA, States, Municipalities, and the Private Sector

After two days of extensive discussions about public-private partnerships and alternative financing mechanims, I am sure we all have a greater appreciation of the magnitude of the funding problem for environmental protection. This conference is an important step in the continuing effort to fund our environmental future. The Action Agenda included in the proceedings to this conference summarizes the many roles you have identified for EPA, states, localities, and the private sector to take on or continue as we carry out our environmental mandate. Let me offer a few observations by way of closing. To continue our momentum:

- **EPA should identify legal impediments to partnerships and alternative financing and eliminate them;**
- **EPA should give states more flexibility to manage its programs. Region 1's "friction fighting program" seeks to do this;**
- **EPA should reduce the reporting burden on states and localities;**
- **EPA and states should develop better clearinghouses to collect, analyze, and share data;**
- **The Environmental Financial Advisory Board should identify barriers and incentives to investment and financing for environmental projects, and propose changes to overcome barriers; and**
- **EPA, states, localities, and the private sector should be creative in all of its efforts to finance and manage environmental programs.**

Region 1 looks forward to participating with the states and localities of New England, with EPA Headquarters, and with the private sector as we explore and implement creative forms of financing to support our environmental services.

Thank you for participating in our conference.

Action Agenda

Key Roles

This section highlights important points brought out in this and other EPA-sponsored Public-Private Partnership and Alternative Financing conferences. It identifies key roles for EPA, state government, local government, and the private sector to assist in the successful development of public-private partnerships and alternative financing mechanisms that will help to fund the costs of our environmental future.

Federal-EPA

Use public relations to increase public cooperation concerning the potential role of the private sector in solving environmental problems.

Provide start-up capital in the form of grants that will be used to fund model projects.

Offer financial, legal, and technical assistance to parties considering alternative financing mechanisms or public-private partnerships.

Develop more and better information clearinghouses that will collect, analyze, and share data among all levels of government and between the public and private sectors.

Increase the involvement of the regulated community during the drafting of legislation. This will result in laws that are conducive to the formation of alternative financing mechanisms and public-private partnerships.

Create a workgroup to examine the legislative and regulatory barriers that impede the formation of alternative financing mechanisms and public-private partnerships.

Sponsor conferences and workshops that can be used to disseminate information on the details of implementing alternative financing mechanisms and public-private partnerships.

Encourage the U.S. Treasury Department to develop and issue favorable regulations to support greater private involvement in local government's provision of services.

Establish relationships with members of the House Ways and Means Committee, the Senate Finance Committee, and their staffs and request them to consider legislation providing more favorable tax conditions.

Elicit the assistance of advisory groups such as the Financial Advisory Board that will work to provide feedback concerning federal programs and policies.

Reduce the rigidness of federal programs by allowing the states more flexibility in the management of their environmental programs and reducing the reporting burden on states and localities.

State

Use public relations and educational campaigns to build public support for environmental programs.

Explore the viability of alternative financing mechanisms to supplement state general revenues for environmental services.

Investigate within state legislatures approaches to alternative financing that might be included within legislation for state environmental programs.

Provide financial grants that will assist in the formation of public-private partnerships.

Provide information to the public in the form of handbooks, tours of existing public-private facilities, and conferences.

Develop legislation that will make public-private partnerships attractive. Flexibility in the legislation will be necessary to respond to the unique needs of small communities.

Local

Provide public education as a key ingredient for ensuring the success of a community based partnership.

Review all financial options and their implications and feasibility such as new taxes, user fees, bonds, and public-private partnerships.

Follow the status of federal regulations that may have profound consequences on the municipal level. Work with state representatives to ensure that legislation remains flexible and responsive to individual community needs and circumstances.

Retain competent legal counsel during service contract negotiations to clearly define the responsibilities of the private and public partners.

Private Sector

Explore potential undertakings where partnerships would serve in the best interest of the community.

Market available expertise to communities to help solve environmental management problems.

Work to negotiate contracts with governments that equitably distribute the risk and provide a financial return that is commensurate with the level of risk.

Follow the status of federal and state regulations and work with Congressional members and their staffs to ensure that legislation that is conducive to the private sector's participation is passed.

Become involved and contribute expertise and time to task forces and other groups that are interested in promoting public-private partnerships.

Use public relations to inform the public of other successful public-private partnerships the firm has been involved with.

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